ADMINISTRATION MANUAL

Netbiter® Argos

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Doc ID: HMSI-168-104 Version: 4.00

Table of Contents

Page

1 Preface 5

1.1 About This Document 5
1.2 Related Documents 5
1.3 Document history 5
1.4 Conventions 6

2 Introduction 7

2.1 Netbiter Services and Account Types 7

3 Getting Started 8

3.1 Preparation 8
3.2 Creating a Netbiter Argos Account 9
3.3 Activating a Field System 11
3.4 Upgrading to Manage and Analyze 12
3.5 Adding More Field Systems (M&A) 14
3.6 Connecting to the Netbiter Gateway 15

4 Using Netbiter Argos 16

4.1 The Online Help System 16
4.2 The Presentation Tab 17
4.3 The Reports Tab (M&A) 22
4.4 The Management Tab 22

5 Configuration 28

5.1 Adding Devices 29
5.2 Configuration – Logging 31
5.3 Configuration – Visualization 35
5.4 Configuration – Alarms 37
5.5 Configuration – Connected Device Profile 39
5.6 Configuration –Gateway Settings 40
5.7 Server Side Alarm Configuration 43
5.8 Synchronizing the Configuration 44

6 Projects (M&A) 45

6.1 Projects – Administration 45
6.2 Projects – Add Project 46
6.3 Changing a Project Configuration 47

7 Dashboards 48
7.1 Dashboard Types 49
7.2 Creating a Dashboard 50
7.3 Editing Dashboards 51

8 Reports (M&A) 69
8.1 Report Types 70
8.2 Which Report Should I Use? 71
8.3 The Reports Page 71
8.4 Creating a Report 72
8.5 Report-specific Settings 73

9 Creating Templates and Profiles 75
9.1 Creating a Device Template 75
9.2 Creating a Device Profile (M&A) 81
9.3 Editing a Device Profile (M&A) 82

10 Account Settings (V&C) 83
10.1 Billing 83
10.2 Subscription 83
10.3 Log Calculation 83
10.4 Configuration 84

11 Account Settings (M&A) 85
11.1 Information – Summary 85
11.2 Information – Log Calculation 85
11.3 Information – Configuration 86
11.4 Licensing – Billing 86
11.5 Licensing – Subscription 86
11.6 Licensing – Users 87
11.7 Users – All Users 87
11.8 Users – Users by Project 88
11.9 Users – Add User 89
11.10 Users – User Overview 90
11.11 Users – Edit User 92
11.12 External Data Access 96
11.13 Customize 99

12 Replacing a System (M&A) 100
12.1 Replacing a System 100

13 Netbiter WS Gateways 101

13.1 Enabling Netbiter Argos Communication 101

13.2 Adding a Netbiter WS to Netbiter Argos 102

13.3 Updating the Configuration 102

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1 Preface

1.1 About This Document

This manual describes how to install and configure Netbiter EasyConnect gateways.

For additional related documentation and file downloads, please visit the Netbiter support website at www.netbiter.com/support.

1.2 Related Documents

Related documents

Document	Author
Netbiter EasyConnect Gateway Installation Guides	HMS
Netbiter EasyConnect User Manual	HMS
Netbiter Remote Access User Manual	HMS
Netbiter WS100/WS200 User Manual	HMS

1.3 Document history

Summary of recent changes

Change	Where (section no.)
Updated screenshots and misc. graphics	—
Updated password recommendations	*3.2.1*
Added info about parameter type conversion	*5.2*, *5.3*
Added info about cloning log and visualization parameters	*5.2*, *5.3*
Added info about limitations for tags.	*5.2*, *5.3*, *5.4*
Project dashboards added	*7*
Added info about subscription key list	*11*
Updated section on WS gateways	*13*

Revision list

Version	Date	Author	Description
1.00	Nov. 2012	ViHa	First official release.
2.00	Dec. 2012	SDa	Major update
2.01	2013-02-28	SDa	Fixed typos
2.02	2013-04-23	SDa	Minor text fixes
2.03	2013-05-27	SDa	Added user level "project manager".
2.04	2013-06-18	SDa	Added info on SNMP, hysteresis logging and reports.
2.10	April 2014	SDa	Added info on remote access, minor updates.
2.20	June 2014	SDa	New account service levels
2.30	Sept. 2014	SDa	Added info on upgrade to M&A
2.40	Nov. 2014	SDa	Added support for EtherNet/IP and proxy servers Improved alarm handling New chapters on project configuration and system replacement
3.00	2015-06-10	ThN	Major update for May 2015 Argos release New document structure
3.10	2015-06-30	ThN	Minor corrections and updates
3.20	2015-11-05	ThN	Minor corrections and updates
4.00	2015-12-01	ThN	Update for Nov. 2015 Argos release Misc. corrections and additions Layout and structure changes

1.4 Conventions

Unordered (bulleted) lists are used for:

- Itemized information
- Instructions that can be carried out in any order

Ordered (numbered or alphabetized) lists are used for instructions that must be carried out in sequence:

1. First do this,
2. Then open this dialog, and
   a. set this option...
   b. ...and then this one.

Bold typeface indicates interactive parts such as connectors and switches on the hardware, or menus and buttons in a graphical user interface.

```
Monospaced text is used to indicate program code and other
kinds of data input/output such as configuration scripts.
```

This is a cross-reference within this document: *Conventions, p. 6*

This is an external link (URL): www.hms-networks.com

This is additional information which may facilitate installation and/or operation.

This instruction must be followed to avoid a risk of reduced functionality and/or damage to the equipment, or to avoid a network security risk.

Caution
This instruction must be followed to avoid a risk of personal injury.

WARNING
This instruction must be followed to avoid a risk of death or serious injury.

2 Introduction

2.1 Netbiter Services and Account Types

View and Control (V&C)	The default service level when creating a new account at Netbiter Argos. It provides access to basic remote management functions for a single Netbiter field system.
Manage and Analyze (M&A)	An extended service level for use with two or more Netbiter field systems. It enables the complete set of available features in Netbiter Argos.
Remote Access	A special mode for Netbiter EC310 and EC350, supporting remote access to connected devices via secure tunnels over the Internet or mobile networks. Remote Access mode can be enabled in both V&C and M&A service levels. Configuration and usage of Remote Access is described in the ***Netbiter Remote Access User Manual***.

Please contact your reseller or visit www.netbiter.com/support for more information about the different Netbiter services.

3 Getting Started

3.1 Preparation

For instructions on how to physically install and connect a Netbiter gateway, please refer to the user manual and/or to the installation guide that was supplied with the gateway.

In order to use Netbiter Argos you first have to create an account for your first field system. To create a new account you will need:

- A Netbiter EasyConnect gateway connected to the Internet or to a mobile network
- The System ID and Activation Code supplied with the Netbiter gateway

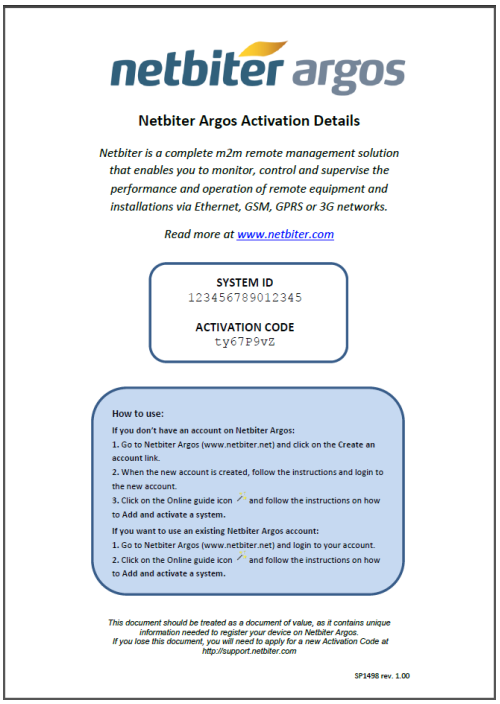
netbiter argos
Netbiter Argos Activation Details
Netbiter is a complete m2m remote management solution that enables you to monitor, control and supervise the performance and operation of remote equipment and installations via Ethernet, GSM, GPRS or 3G networks.
Read more at www.netbiter.com
SYSTEM ID
123456789012345
ACTIVATION CODE
ty67P9vZ
How to use:
If you don't have an account on Netbiter Argos:
1. Go to Netbiter Argos (www.netbiter.net) and click on the Create an account link.
2. When the new account is created, follow the instructions and login to the new account.
3. Click on the Online guide icon and follow the instructions on how to Add and activate a system.
If you want to use an existing Netbiter Argos account:
1. Go to Netbiter Argos (www.netbiter.net) and login to your account.
2. Click on the Online guide icon and follow the instructions on how to Add and activate a system.
This document should be treated as a document of value, as it contains unique information needed to register your device on Netbiter Argos.
If you lose this document, you will need to apply for a new Activation Code at http://support.netbiter.com
SP1498 rev. 1.00

Fig. 1 Netbiter Argos Activation Details

Mobile Networks

Netbiter EasyConnect gateways are primarily intended to be used with Netbiter SIM cards, which are configured ready to use and have PIN code security disabled.

If you are using a SIM card which was not provided by HMS, make sure before installing the Netbiter that you have the following information:

- The phone number for the SIM card
- The APN (Access Point Name) for the mobile network
- The username and password (if required by the network operator)

Also make sure that PIN code security has been disabled for the SIM card.

3.2 Creating a Netbiter Argos Account

To register a Netbiter Argos account you will need the System ID and Activation Code supplied with the Netbiter. If the Activation Code has been lost, contact Netbiter support.

1. Go to the Netbiter Argos website www.netbiter.net.
2. Click on **Create an account** and enter the required information in the registration form. See also *Password recommendations, p. 10*.

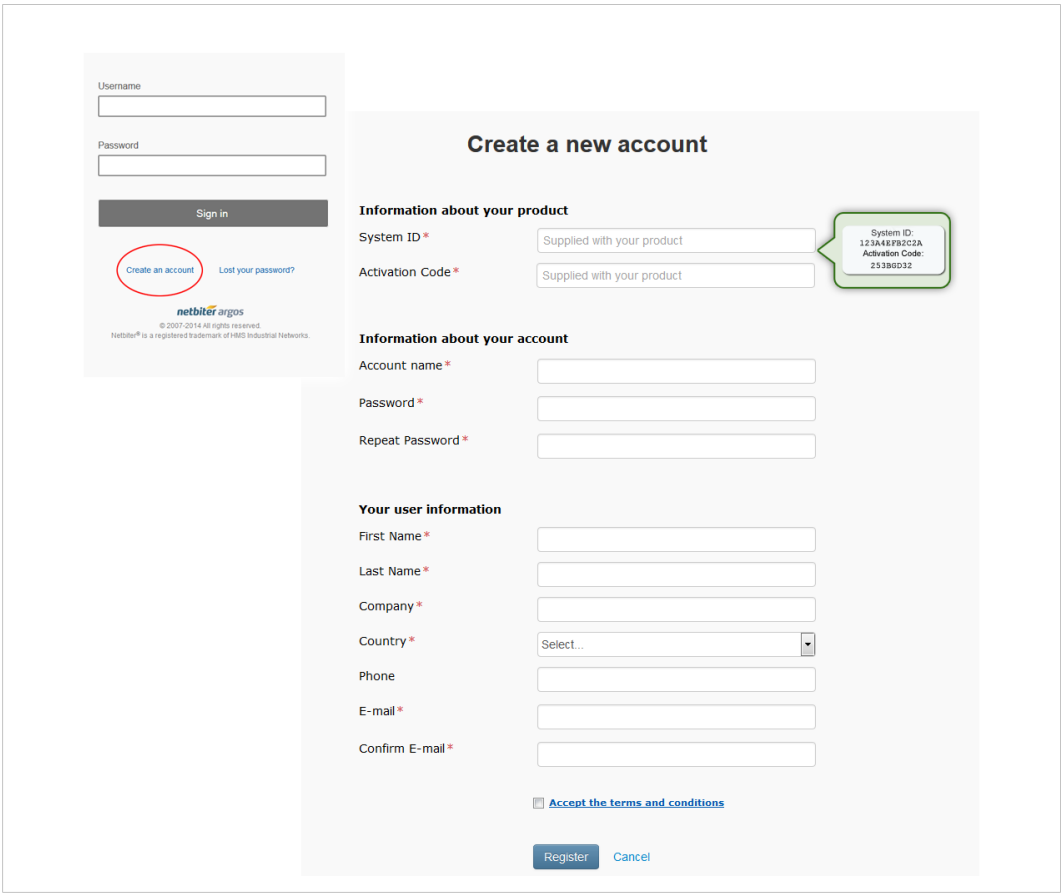

Fig. 2 Creating an account

3. Click on the **Accept the terms and conditions** link at the bottom of the registration form. If you approve of the terms and conditions for using Netbiter Argos that are presented, continue to the next step.
4. Close the Terms and Conditions popup window, tick the checkbox and click on **Register**. An e-mail containing an activation link will be sent to the e-mail address that you provided.

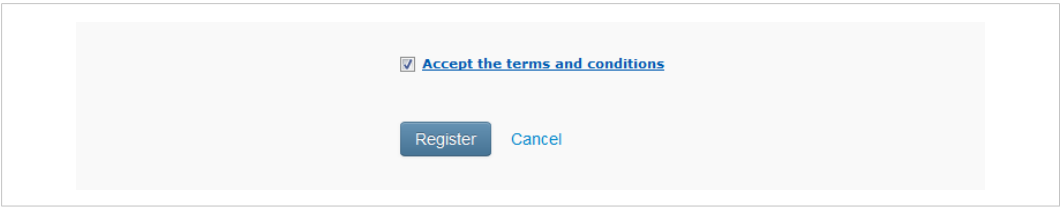

Fig. 3 Completing registration

5. Click on the activation link in the e-mail sent to you by Netbiter Argos. When the account has been activated you will see a confirmation screen.

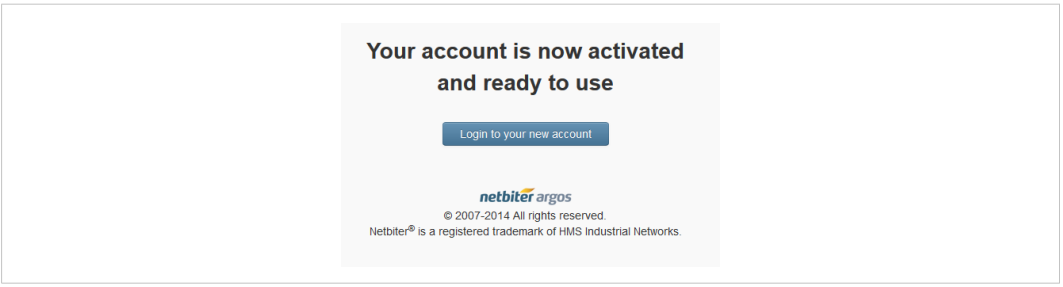
Your account is now activated and ready to use
Login to your new account
netbiter argos
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Fig. 4 Activation completed

You can now log in to your new Netbiter Argos account using the username and password that you supplied in the registration form.

3.2.1 Password recommendations

Netbiter Argos accounts can be set up with either a single password or a passphrase. Using a strong password or passphrase is important to prevent unauthorized access.

Passwords must be between 8 and 19 characters in length, and

- include characters from at least three of the following categories:
  - English uppercase characters (A–Z)
  - English lowercase characters (a–z)
  - Base 10 numerals (0–9)
  - Non-alphabetic characters (e.g. !, *, &, $, ?)
- not contain the username or full name of the user

Passphrases must be between 20 and 40 characters in length, and

- only contain characters from the following categories:
  - English uppercase characters (A–Z)
  - English lowercase characters (a–z)
  - Base 10 numerals (0–9)
  - Non-alphabetic characters (e.g. !, *, &, $, ?)
- not contain the username or full name of the user

> ! *Do not include personal user information in the password or passphrase.*

> ! *Do not use the same password/passphrase on multiple sites.*

3.3 Activating a Field System

A *field system* is one Netbiter gateway plus all the devices connected to it. Before you can use a field system with Netbiter Argos you must activate it.

The first time you log in to Netbiter Argos you will be directed to the **System activation** page. The System ID and Activation code for the Netbiter gateway should already be filled in. If not, enter them now in the corresponding fields.

3.3.1 Activation (EC310/EC350)

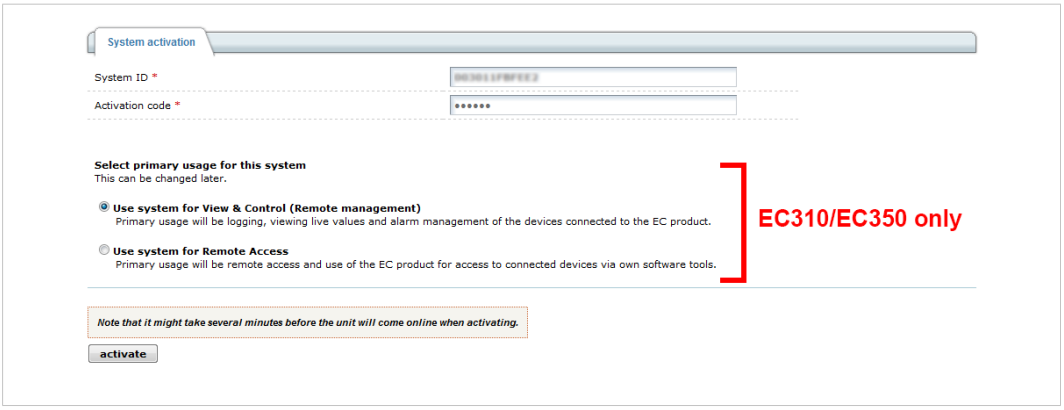

System activation
System ID *
Activation code *
Select primary usage for this system
This can be changed later.
Use system for View & Control (Remote management)
Primary usage will be logging, viewing live values and alarm management of the devices connected to the EC product.
Use system for Remote Access
Primary usage will be remote access and use of the EC product for access to connected devices via own software tools.
EC310/EC350 only
Note that it might take several minutes before the unit will come online when activating.
activate

Fig. 5 System activation

For Netbiter EC310 and EC350, you must select the initial usage mode. The usage mode can be changed later. See also *Netbiter Services and Account Types, p. 7*.

View and Control (Remote Management)	This is the default mode.
Remote Access	A special mode that supports access to connected devices via secure tunnels over the Internet or LAN.

Select the desired usage mode and click on **Activate**.

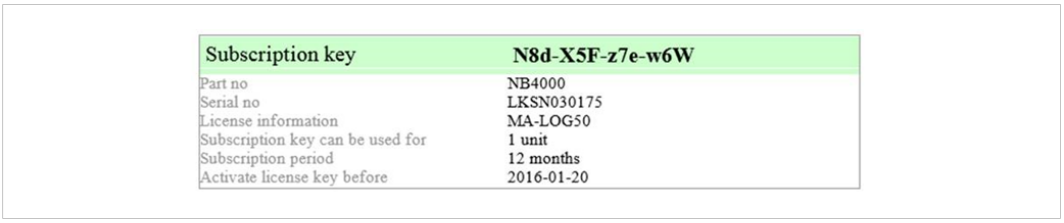
3.3.2 Activation (all other models)

For all other Netbiter EasyConnect models, just click on **Activate**.

3.4 Upgrading to Manage and Analyze

Upgrading a View and Control account to Manage and Analyze (M&A) will unlock the full functionality of Netbiter Argos.

1. Order a subscription key for Manage and Analyze from your sales contact. You will receive an e-mail containing the key.



Subscription key	N8d-X5F-z7e-w6W
Part no	NB4000
Serial no	LKSN030175
License information	MA-LOG50
Subscription key can be used for	1 unit
Subscription period	12 months
Activate license key before	2016-01-20

Fig. 6 Subscription key

2. Log in to your account and click on the account name to open the account settings.

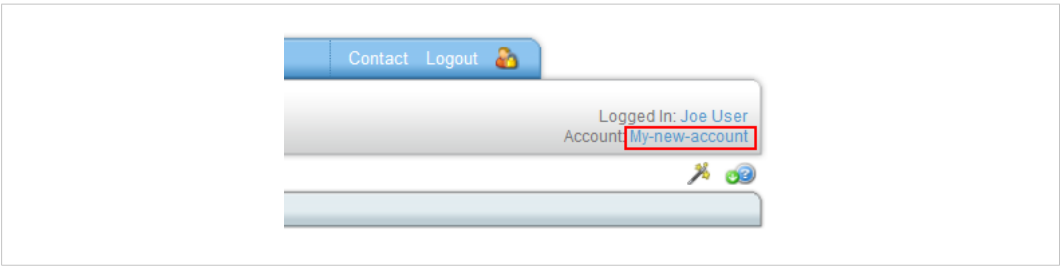


Fig. 7 Account settings link

3. On the **Subscription** tab, click on **Add subscription key**. In the dialog that opens, enter the key you received in the e-mail, then click on **Activate**.

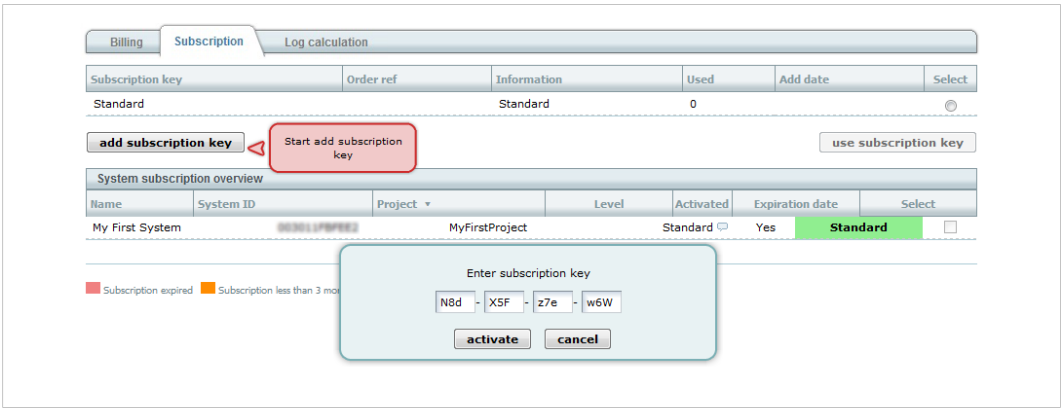


Fig. 8 Entering a subscription key

4. Select the newly added subscription key from the list.

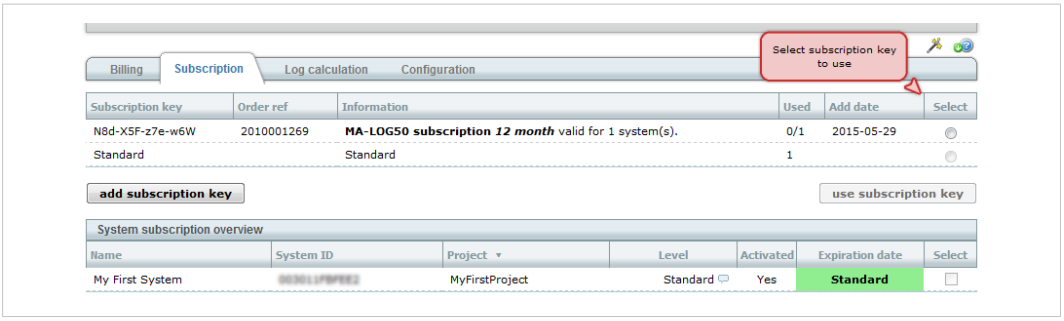


Fig. 9 Selecting the key

5. Select the system to apply the key to.

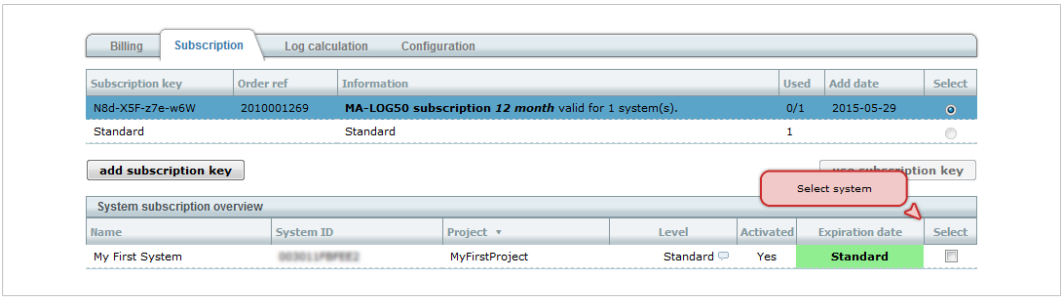


Fig. 10 Selecting a system

6. Click on **Use Subscription Key** and confirm by clicking on **Yes**.

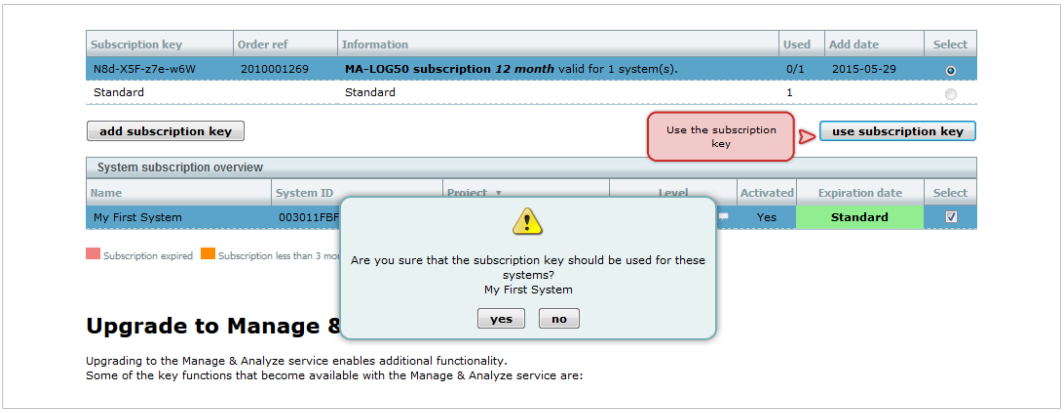


Fig. 11 Activating the subscription key

7. Click on **Upgrade to Manage & Analyze Service**, then click on **Yes**.

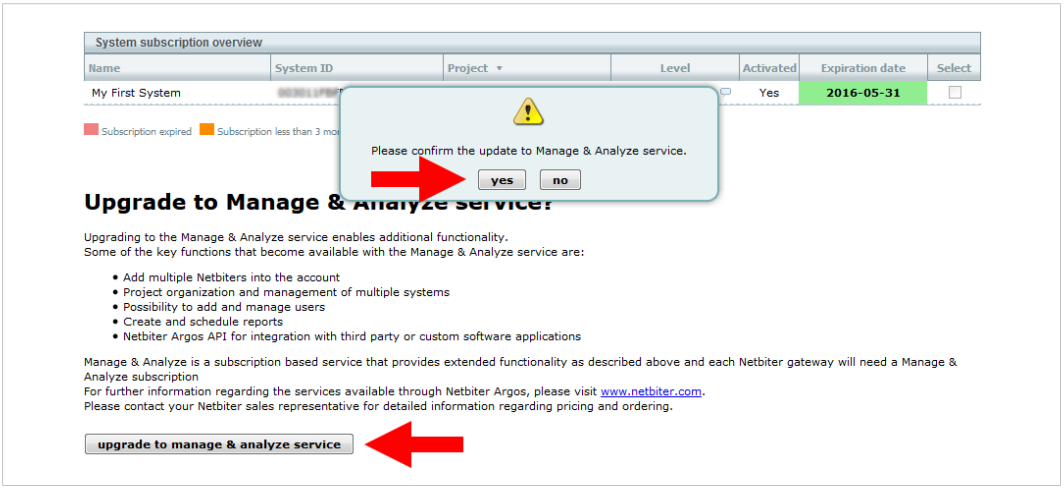

System subscription overview
Name
System ID
Project
Level
Activated
Expiration date
Select
My First System
Yes
2016-05-31
Please confirm the update to Manage & Analyze service.
yes
no
Upgrade to Manage &
Upgrading to the Manage & Analyze service enables additional functionality.
Some of the key functions that become available with the Manage & Analyze service are:
Add multiple Netbiters into the account
Project organization and management of multiple systems
Possibility to add and manage users
Create and schedule reports
Netbiter Argos API for integration with third party or custom software applications
Manage & Analyze is a subscription based service that provides extended functionality as described above and each Netbiter gateway will need a Manage & Analyze subscription
For further information regarding the services available through Netbiter Argos, please visit www.netbiter.com.
Please contact your Netbiter sales representative for detailed information regarding pricing and ordering.
upgrade to manage & analyze service

Fig. 12 Confirming the upgrade

The account will now have access to all menus and tabs and the full functionality of Netbiter Argos.

3.5 Adding More Field Systems (M&A)

Manage and Analyze accounts can contain multiple field systems which in turn can belong to different projects or a single project. See also *Projects (M&A), p. 45*.

> *Using a consistent and logical naming convention for field systems and projects is a good practice which will save time and effort when managing your systems.*

1. On the **Management** tab, select **All systems** >> **Add system**.

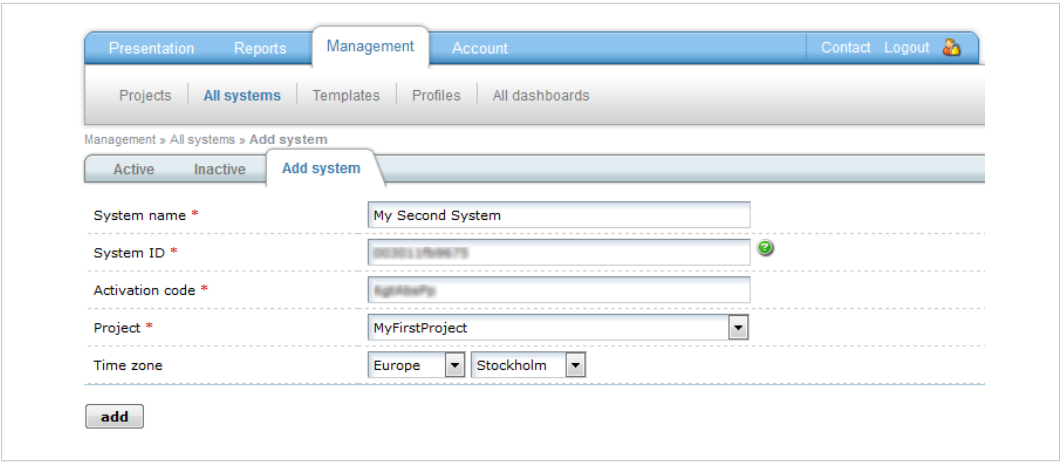


Fig. 13 Adding a system

2. Enter a descriptive name for the new field system.
3. Enter the System ID and Activation code for the gateway.
4. Select the **Project** that the field system will be a part of.
5. Set the **Time zone** where the field system will be installed (optional).
6. Click the **Add** button. You will be redirected to the **Inactive** tab, indicating that the system has been added to the project but is still inactive.

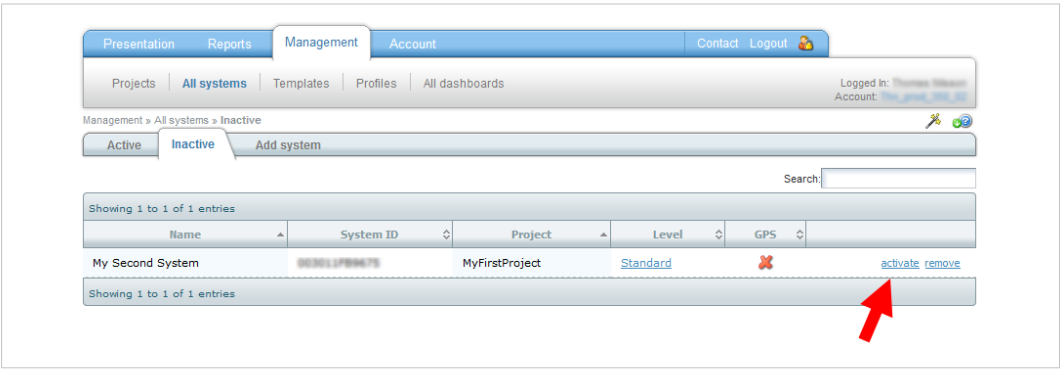


Fig. 14 System added but still inactive

7. Click on the **Activate** link.
8. Complete the activation as described in *Activating a Field System, p. 11*.

3.6 Connecting to the Netbiter Gateway

Depending on your network setup and Netbiter gateway model you may need to carry out some final steps to establish connection between Netbiter Argos and the gateway.

Ethernet Connection

- Check that the LED indicators on the gateway indicate an active connection with the network. If not, you may have to change the local network settings.
- Mobile network connection will be enabled as a default when a Netbiter SIM card is present. Connection over Ethernet must then be enabled in the local configuration pages of the gateway. See the ***Netbiter EasyConnect User Manual*** for more info.

Mobile Network – Netbiter SIM Card

1. On the **Mobile network** tab, select **I have a Netbiter SIM card**.

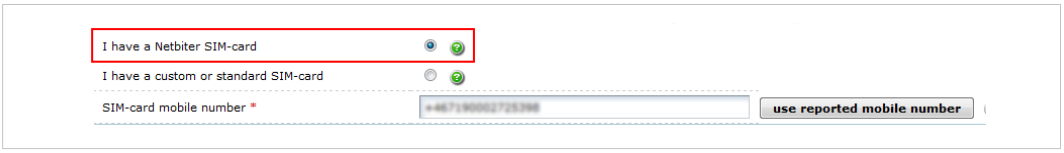


Fig. 15 Using a Netbiter SIM card

2. If available, click on **Use reported mobile number** to load the phone number that was reported from the SIM card. Otherwise, enter the phone number manually.
3. Click on **Send** to confirm and transmit the settings to the gateway.

Mobile Network – Other SIM Card

1. On the **Mobile network** tab, select **I have a custom or standard SIM card**.

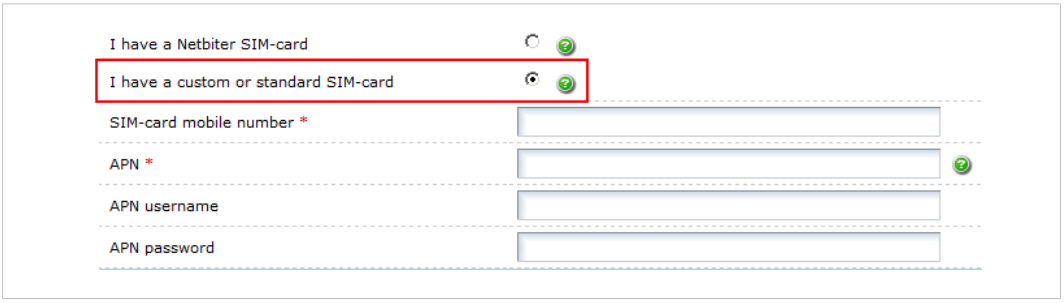


Fig. 16 Using other SIM cards

2. If available, click on **Use reported mobile number** to load the phone number that was reported from the SIM card. Otherwise, enter the phone number manually.
3. Enter the APN (Access Point Name) for the SIM card and (if required) the APN username and password. This should be provided by the mobile network operator.
4. Click on **Send** to confirm and transmit the settings to the gateway.

The SMS text message can take a long time to deliver depending on the mobile network used. If the message has not been delivered within 2 hours it will be discarded and must be resent. Make sure that you entered the correct phone number and that the Netbiter gateway is powered up and has coverage.

4 Using Netbiter Argos

The user interface of Netbiter Argos is organized in a number of web pages, which are accessed by clicking on *tabs*. A reference to a *tab* in this manual usually means the web page that is accessed by clicking on it.

Which tabs and functions are available will differ depending on the Netbiter account type (*View and Control* or *Manage and Analyze*) and – in Manage and Analyze accounts – the user type (*Administrator* or *User*).

In *Remote Access* mode, some tabs are disabled. See the ***Netbiter Remote Access User Manual*** for more information about how to configure and use this mode.

4.1 The Online Help System

Netbiter Argos contains three types of built-in help:

Click the magic wand icon for step-by-step instructions on how to configure and use Netbiter Argos.

Click the blue question mark icon for context-sensitive help.

Hover over a green question mark to see a pop-up help text.

The Netbiter Argos Administration Manual (this document) should be regarded as a complement to the online help system, which is usually more up-to-date.

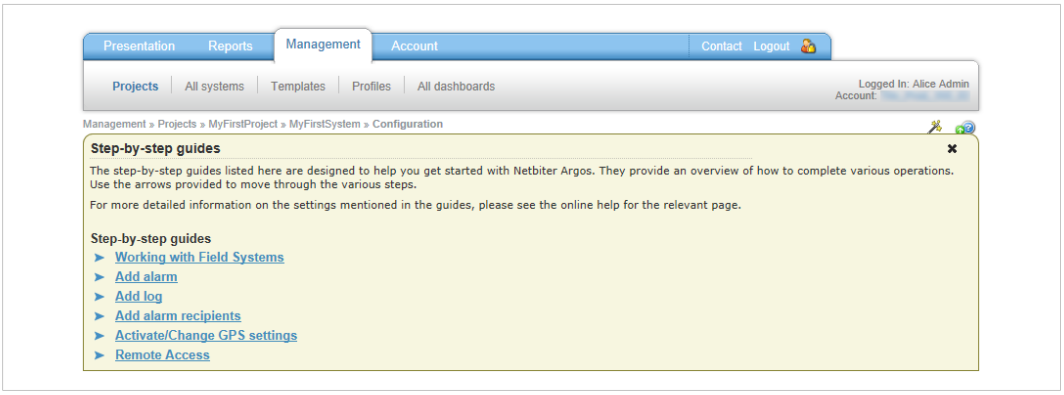

Presentation
Reports
Management
Account
Contact
Logout
Projects
All systems
Templates
Profiles
All dashboards
Logged In: Alice Admin
Account:
Management » Projects » MyFirstProject » MyFirstSystem » Configuration
Step-by-step guides
The step-by-step guides listed here are designed to help you get started with Netbiter Argos. They provide an overview of how to complete various operations. Use the arrows provided to move through the various steps.
For more detailed information on the settings mentioned in the guides, please see the online help for the relevant page.
Step-by-step guides
Working with Field Systems
Add alarm
Add log
Add alarm recipients
Activate/Change GPS settings
Remote Access

Fig. 17 Online help in Netbiter Argos

4.2 The Presentation Tab

The **Presentation** tab is the starting point when you log on to a Netbiter Argos account. It is used for displaying field system data as text or as graphical elements. In addition to the standard pages under this tab you can also create your own customized pages, called *Dashboards*.

In *View and Control* accounts, there is only one field system which is available directly under the **Presentation** tab.

In *Manage and Analyze* accounts, field systems can be selected per project via the **Project** page, or directly via the **All systems** page. The **All alarms** page presents an overview of alarms in all projects and field systems.

The Presentation tab is not available in Remote Access mode.

4.2.1 Presentation – Overview

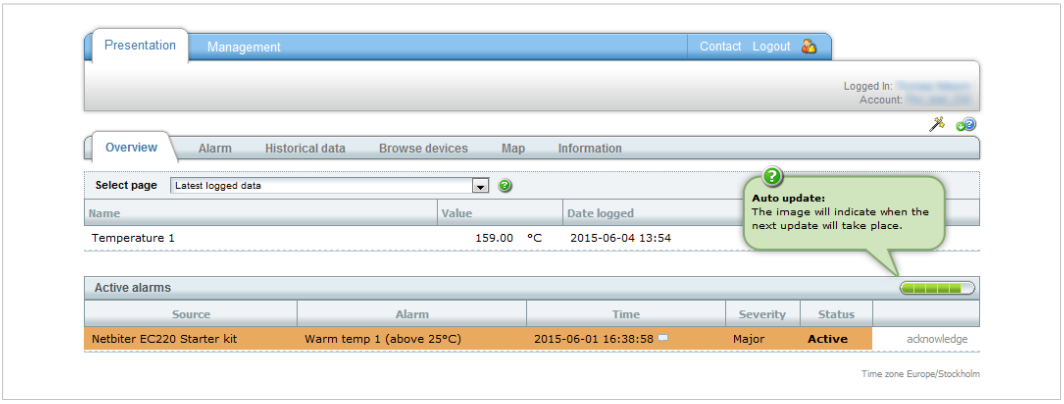


Fig. 18 The Presentation tab

The **Overview** tab shows the latest log data and alarms for the selected field system. A green thermometer indicates the update status.

4.2.2 Presentation – Alarm

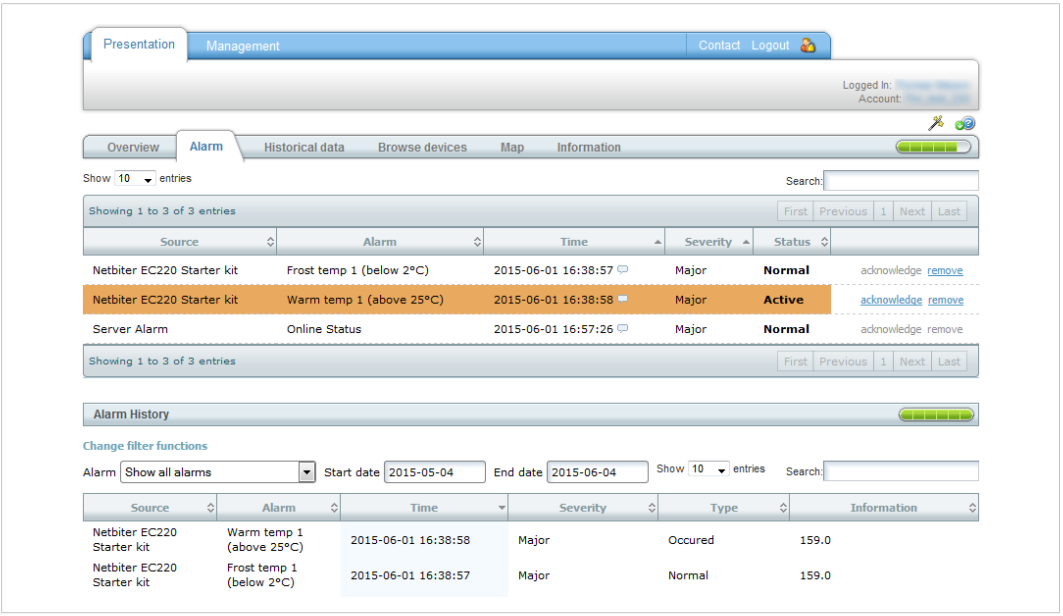


Fig. 19 Presentation – Alarm

Alarms are color-coded according to their **Severity**, which will assist in prioritizing when responding to the alarms. See the online help for more information.

Users can be authorized to **Acknowledge** active alarms. An acknowledged alarm will return to status Normal if the alarm condition disappears. While the alarm condition persists, an acknowledged alarm will stay active but will not be triggered again.

Clicking on a column heading will sort the alarms according to field content. Alarms can also be filtered by the content of any field by entering a text string in the **Search** field. The search filter can be used together with the sort function.

4.2.3 Presentation – Historical Data

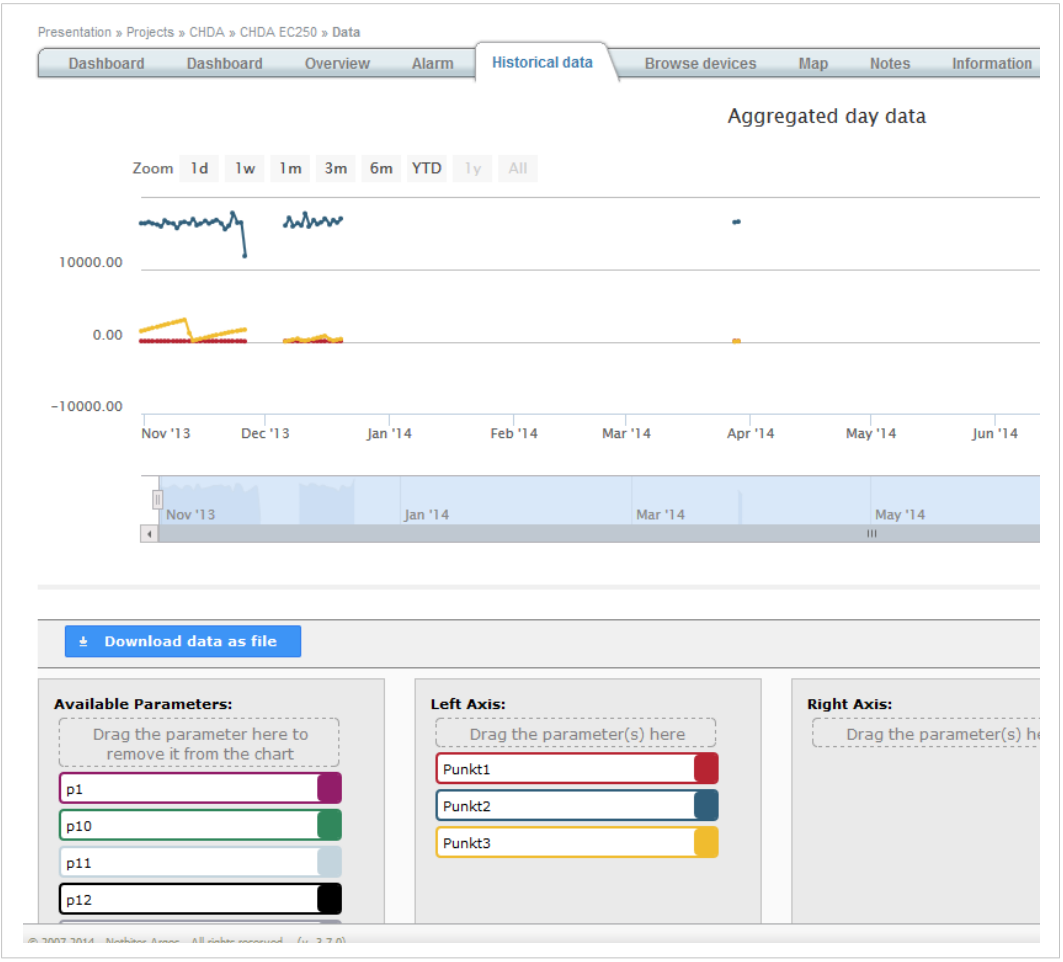


Fig. 20 Presentation – Historical data

This page displays historical field system data as graphs. The available parameters can be assigned to the left or right axis using drag-and-drop.

4.2.4 Presentation – Browse Devices

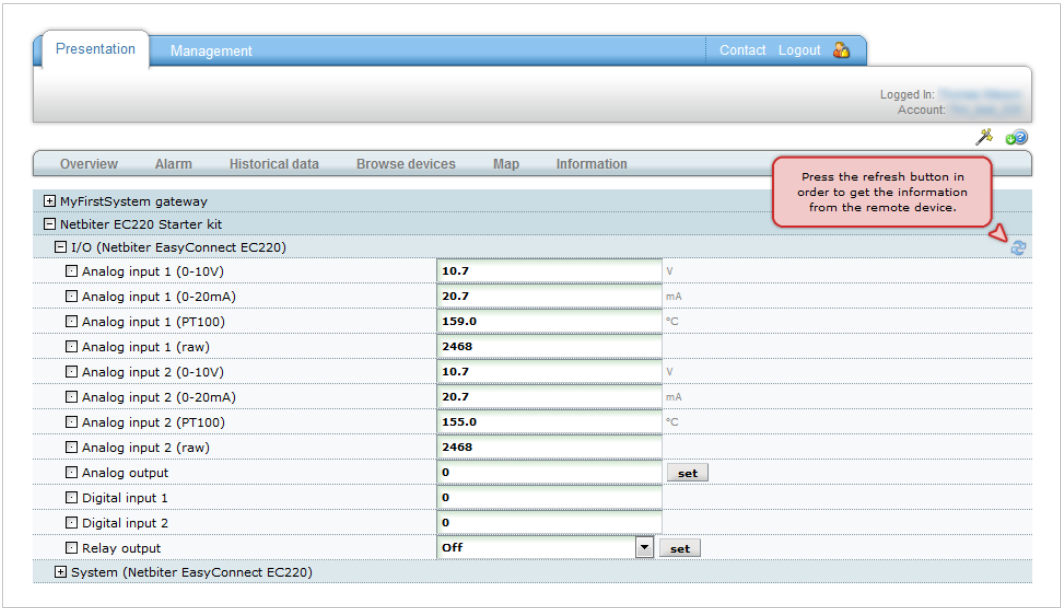


Fig. 21 Presentation – Browse devices

This page makes it possible to browse all available device parameters in a field system. Click on the refresh icon to retrieve the current parameter data from the device.

4.2.5 Presentation – Map

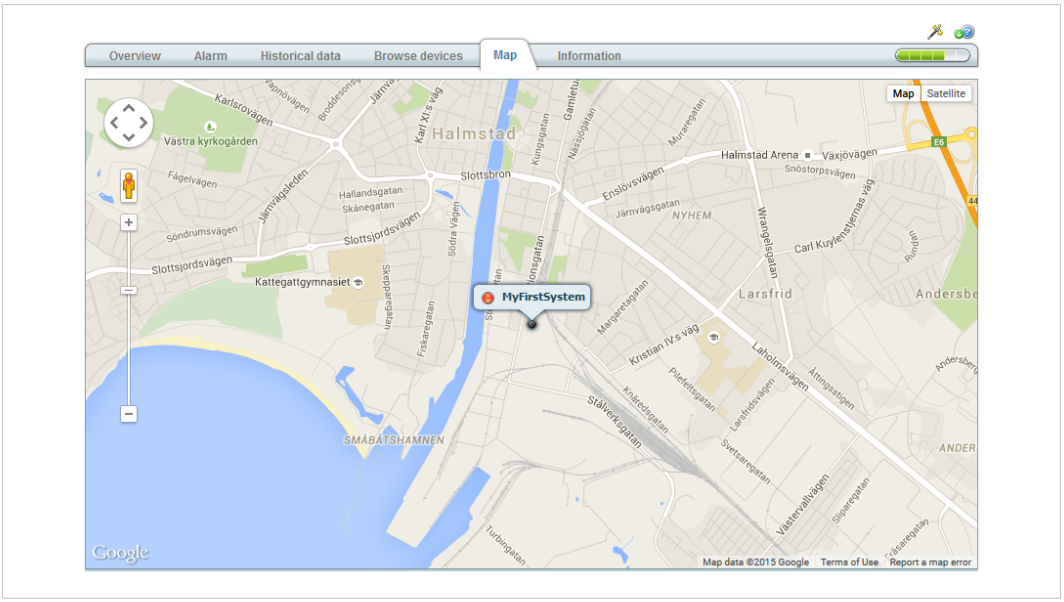


Fig. 22 Presentation – Map

The **Map** page shows the configured geographical location of the field system. The location must first be entered manually or using a GPS receiver (where supported).

Se also *Management – Map, p. 25*.

4.2.6 Presentation – Information

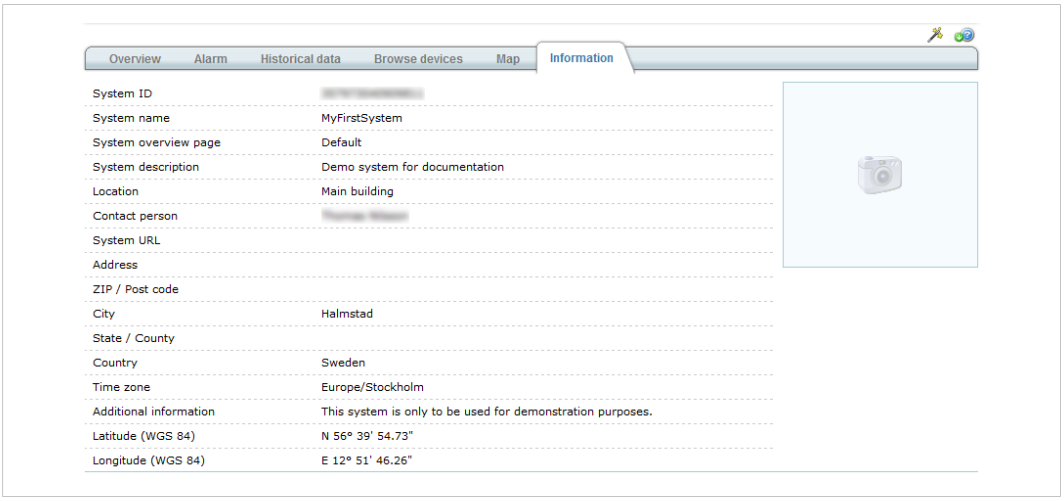


Fig. 23 Presentation – Information

This page presents the basic properties of the field system.

4.3 The Reports Tab (M&A)

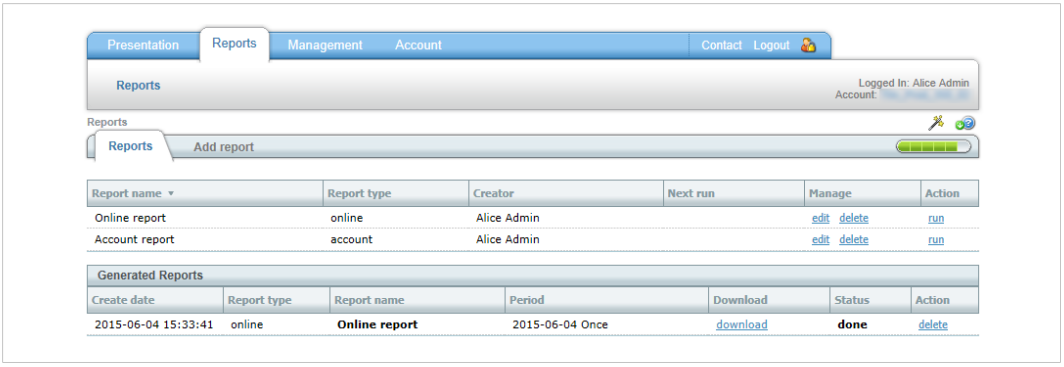


Fig. 24 The Reports tab

Reports are used to collate and present all kinds of data from Netbiter Argos in a downloadable format, such as PDF or XLS (Excel spreadsheet). Reports can be formatted in many different ways and can contain plain text, lists, graphs and diagrams, etc.

Reports can be run manually or generated automatically at regular intervals. A notification can be sent to the account administrator whenever a report is generated.

For information on how to create reports, see *Reports (M&A), p. 69*.

4.4 The Management Tab

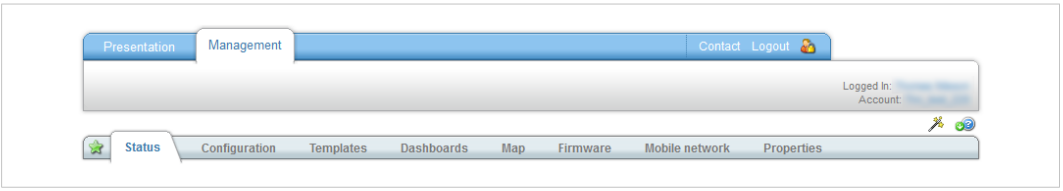


Fig. 25 The Management tab

The Management tab contains all the necessary settings for configuring and managing the field system, including alarms, devices, logs, templates, dashboards, etc.

4.4.1 Management – Status

This tab shows the current status of the field system as well as current and historical information about online status, synchronization, and mobile data traffic (depending on gateway model and configuration).

See the online help in Netbiter Argos for more information.

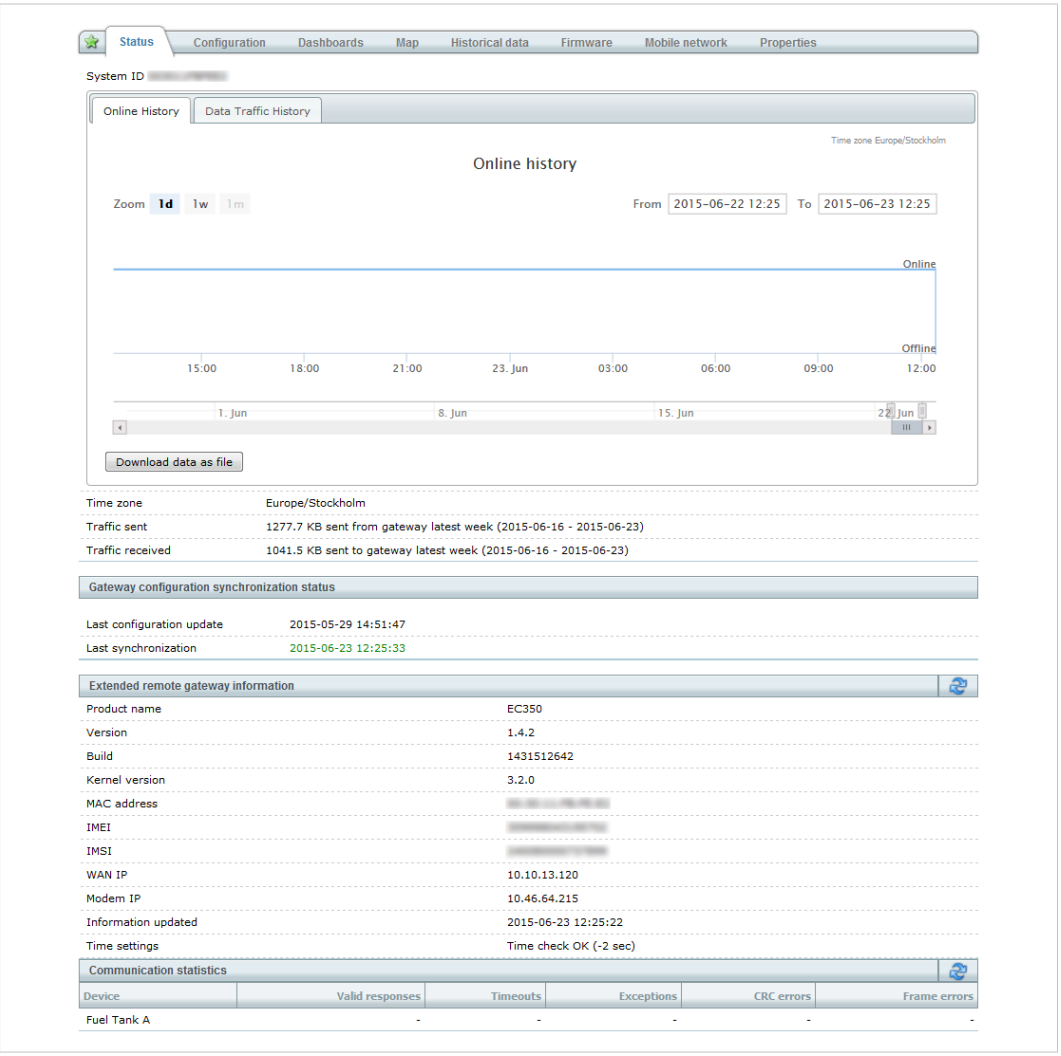


Fig. 26 Management – Status

4.4.2 Management – Configuration

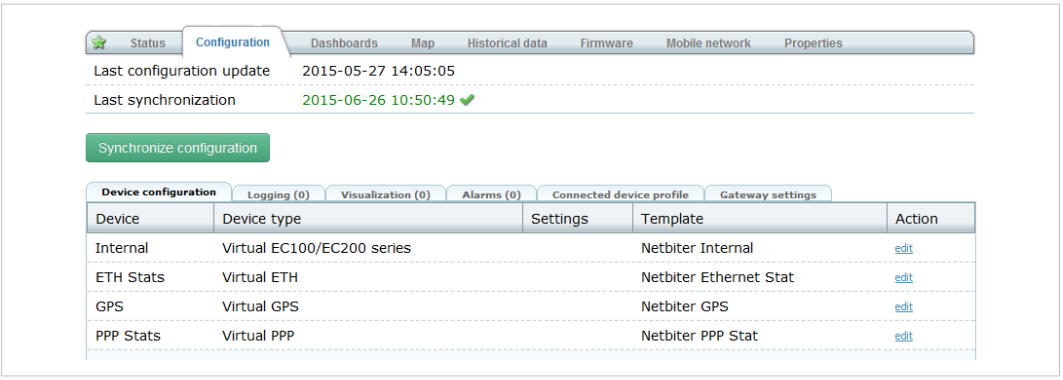


Fig. 27 Management – Configuration

This tab is used for the configuration of field systems.

See *Configuration, p. 28* for descriptions of the available settings.

4.4.3 Management – Templates (V&C)

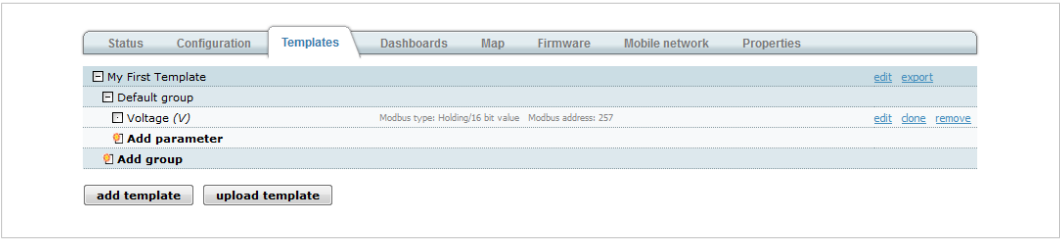


Fig. 28 Management – Templates

In Manage and Analyze accounts, this tab is located on the account level.

This tab is used to add and upload templates to the account.

See *Creating Templates and Profiles, p. 75*.

4.4.4 Management – Dashboards

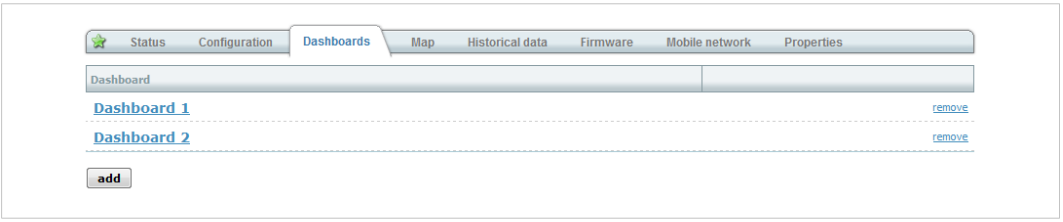


Fig. 29 Management – Dashboards

This tab is used when adding and managing Dashboards.

See *Dashboards, p. 48*.

4.4.5 Management – Map

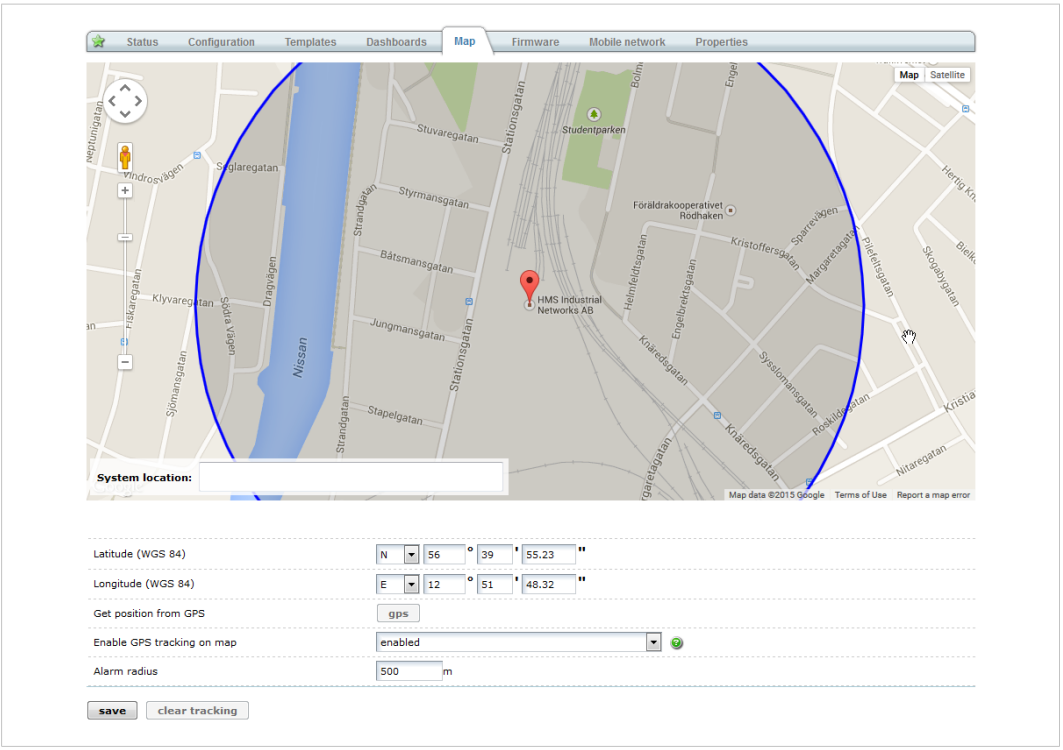


Fig. 30 Management – Map

The geographical location of a field system can be graphically represented on a map. This feature is for presentation only and will not affect the function of the system.

Use the mouse wheel or the slider in the map to zoom, and click and drag to pan. Center the map on the location of your installation, then click on the position to enter the coordinates.

The position can also be set by entering the coordinates in WGS84 format.

Get position from GPS

If the field system includes an external or internal GPS receiver, the coordinates can be retrieved by clicking on **GPS**. The GPS function must also be enabled on the configuration page for the system, see *Configuration –Gateway Settings, p. 40*.

Enable GPS tracking on map

When enabled the indication on the map will be automatically updated if the field system is moved.

Alarm radius

The radius in meters that the system can be moved before it triggers the server-side GPS position alarm. The alarm must be enabled on the configuration page for the system.

4.4.6 Management – Firmware

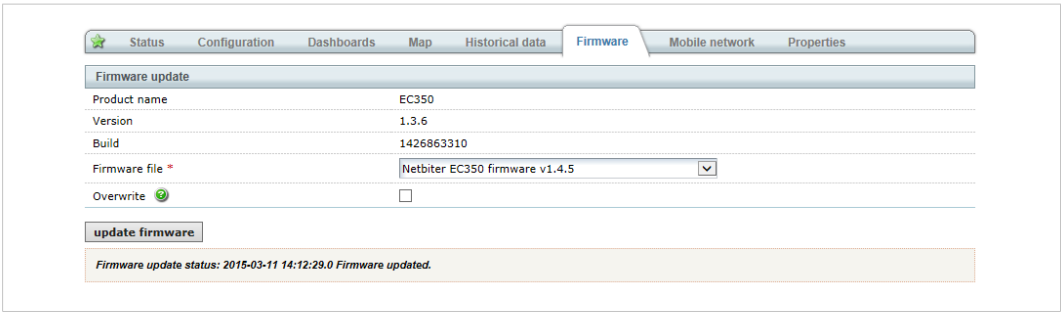


Fig. 31 Management – Firmware

Firmware update

This tab shows the current version and build of the firmware of the Netbiter gateway and allows the firmware to be updated.

If for some reason it is not possible to update the firmware via Netbiter Argos an optional method can be used. See the ***Netbiter EasyConnect User Manual*** for more information.

Firmware file

The available firmware files for the gateway are shown in a drop-down menu. Select the firmware file to install and press **Update firmware** to start the update.

Overwrite

This box should only be checked when re-installing the current firmware version, or if re-verting to an older firmware version.

4.4.7 Management – Mobile Network

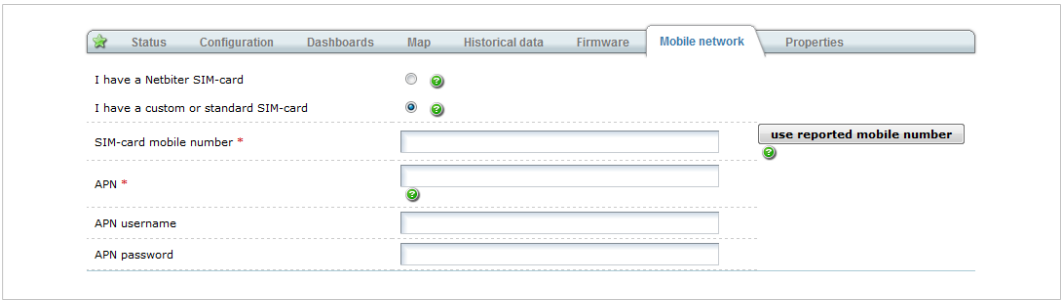


Fig. 32 Management – Mobile network

This tab contains settings for mobile network communication (where supported).

See *Connecting to the Netbiter Gateway, p. 15*.

4.4.8 Management – Properties

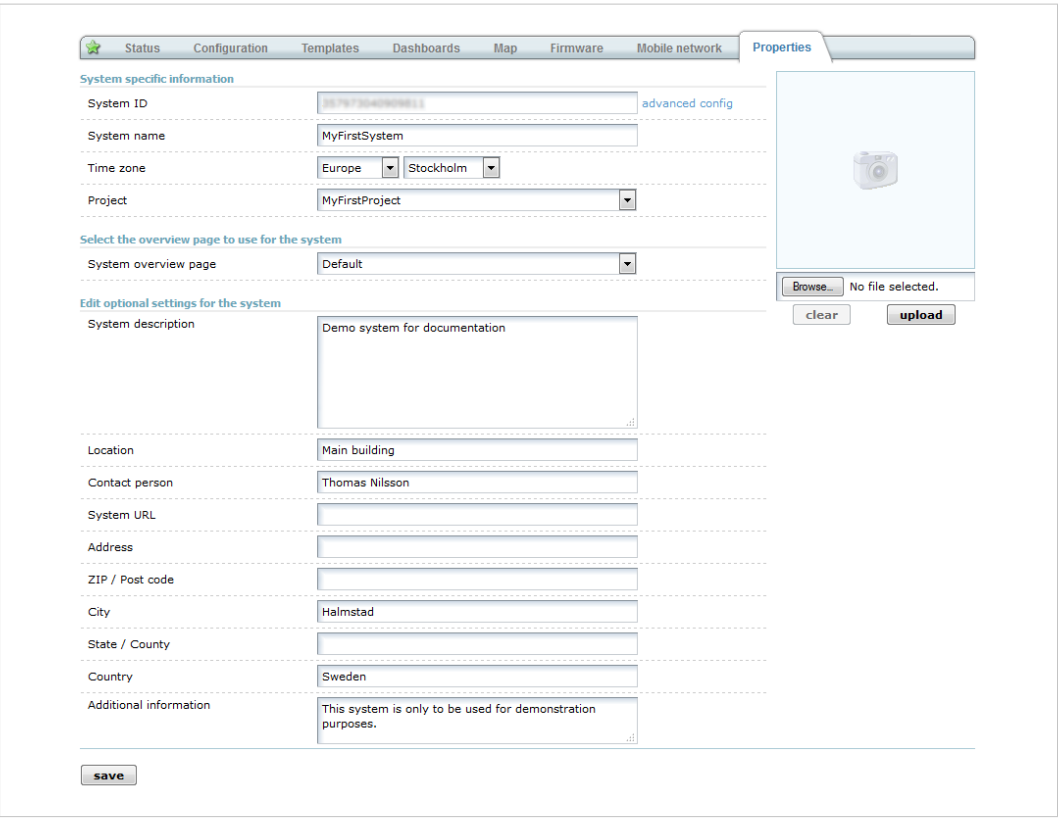


Fig. 33 Management – Properties

This tab allows the entry of various types of information about the field system, such as location, contact persons, description, etc. The system can also be moved to a different project by using a drop-down menu.

All the fields are editable except **System ID**. After making any changes, click **Save**.

5 Configuration

*In View and Control accounts, the **Configuration** page is found directly under the **Management** tab. In Manage and Analyze, you have to select a specific project and system.*

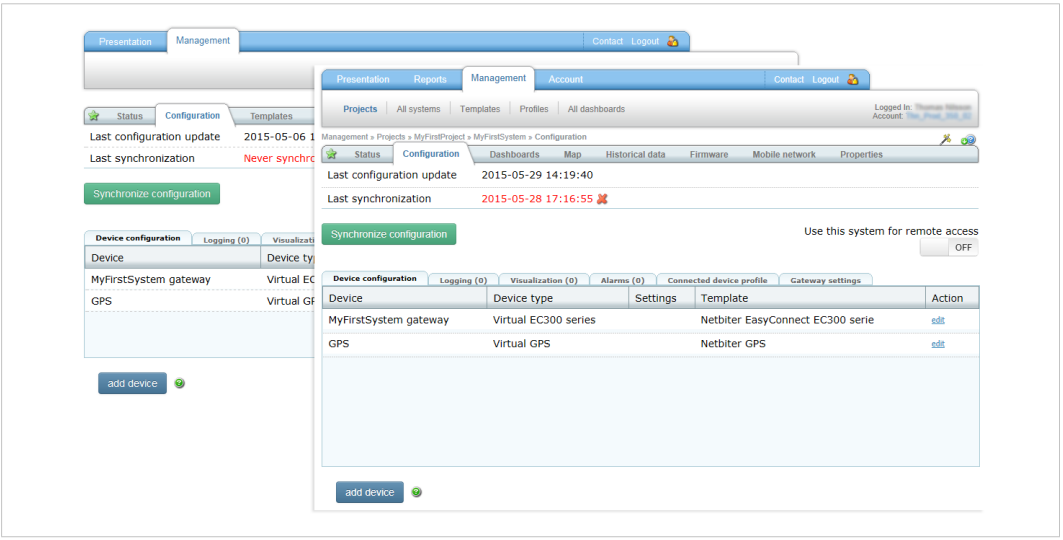


Fig. 34 Configuration page in V&C vs. M&A

Tabs

Device configuration	List of devices in the field system.[1]
Logging	Logging of parameter values from connected devices or internal parameters. See *Configuration – Logging, p. 31*.
Visualization	Graphical representations of field system data. See *Configuration – Visualization, p. 35*.
Alarms	Notifications of events in a field system. See *Configuration – Alarms, p. 37*.
Connected device profiles	Shows what device profiles are connected to this field system. See *Configuration – Connected Device Profile, p. 39*.
Gateway settings	Settings for the communication between the gateway and the devices. See *Configuration –Gateway Settings, p. 40*

Buttons and switches

Synchronize configuration	Click to upload configuration changes to the gateway. See *Synchronizing the Configuration, p. 44*.
Use this system for remote access	Toggles Remote Access mode for Netbiter EC310 and EC350 gateways. In Remote Access mode, only the **Gateway settings** tab will be available. See the ***Netbiter Remote Access User Manual*** for more information.
Add device	Click to add a new device to the field system.

1. Netbiter EasyConnect gateways also provide internal parameters, listed as “virtual” devices. These should not be confused with connected physical devices.

5.1 Adding Devices

Communication between a Netbiter EasyConnect gateway and a connected device requires a *device template* or a *device profile* to provide the mapping between the units.

- A *device template* describes the parameters available in a connected device. It contains information about the available addresses and their data types, with predefined scaling and offsets. Various ways of displaying the parameters can also be determined in the template, e.g. enumerations and read/write conditions.
- A *device profile* contains a device template plus additional configuration to provide a complete interface for the user, including dashboards, visualizations, alarms, etc.

If there is no suitable device template or profile for the device you are connecting, you will have to create one. See *Creating Templates and Profiles, p. 75*.

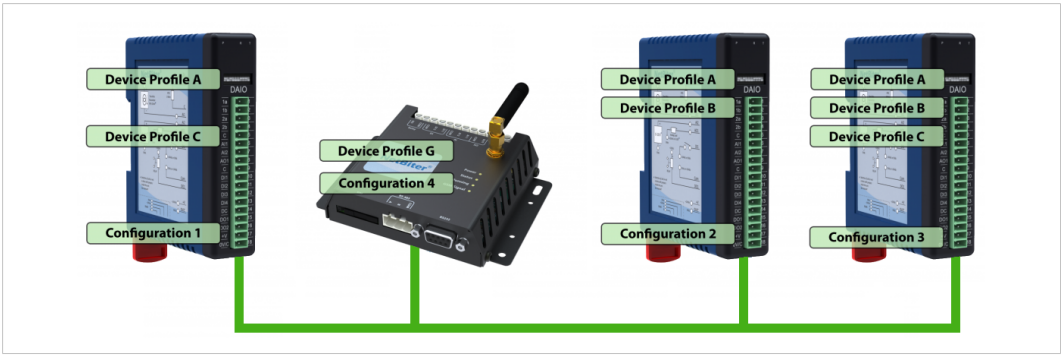


Fig. 35 Example of device profile use

In this example, log and alarm parameters are configured in 4 device profiles that are shared in various ways between the devices (I/O Extenders) and the gateway. The devices and the gateway also have individual configurations.

- Device Profile A is shared by all three devices.
- Device Profile B is shared by devices 2 and 3.
- Device Profile C is shared by devices 1 and 3.
- Device Profile G is used only by the gateway.

5.1.1 Limitations

The number of devices and parameters that can be configured for a field system depend on the Netbiter gateway model.

Netbiter EasyConnect model	EC150/EC250	EC220	EC310/EC350
Max. connected devices	32	16	32
Max. logging parameters	64	16	128
Max. visualization parameters	64	16	128
Max. alarm parameters	64	16	128

5.1.2 Adding a New Device Using a Template or Profile

1. Open the **Device Configuration** page and click on **Add device**.
2. Select **Use configuration from a template/profile**.

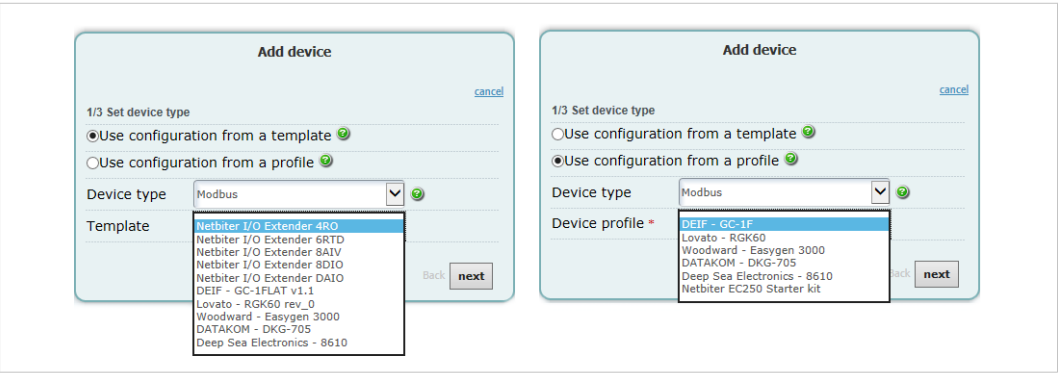


Fig. 36 Adding device from template or profile

3. Select the **Device type** and the desired **Template** or **Device profile** from the drop-down menus, then click **Next**.

   If there is no suitable template or profile available for the device, you may have to create one. See *Creating Templates and Profiles, p. 75*.

4. Enter a name for the device, or click on **Use Device Name From Template**.

   For **Modbus slave** (address), see the documentation for the device.

   If the device uses Modbus TCP, EtherNet/IP or SNMP, you will also have to enter the IP address and port for the device. The default port for Modbus TCP is 502.

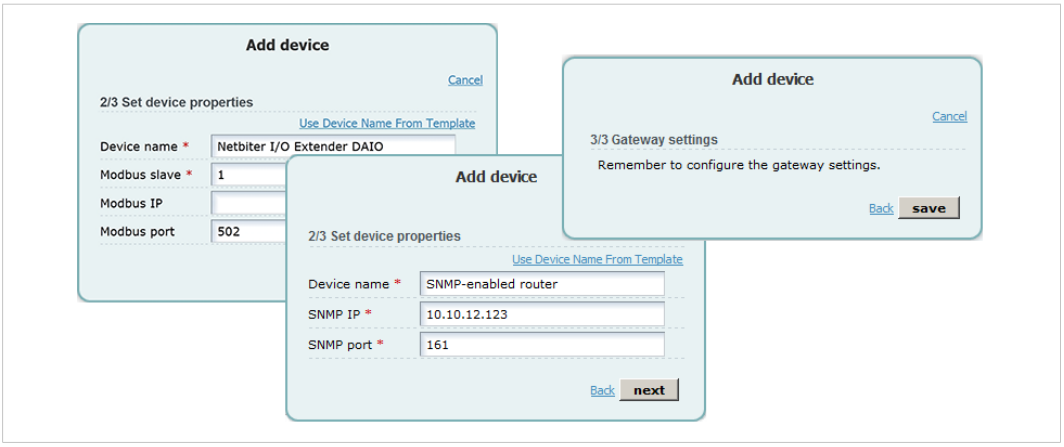


Fig. 37 Setting device properties

5. Click **Next** and then **Save**. The device should now be visible in the device list.

   It may be necessary to edit the gateway settings before synchronizing the configuration. See *Configuration –Gateway Settings, p. 40*.

6. Click on **Synchronize configuration** to upload the configuration to the gateway.

5.2 Configuration – Logging

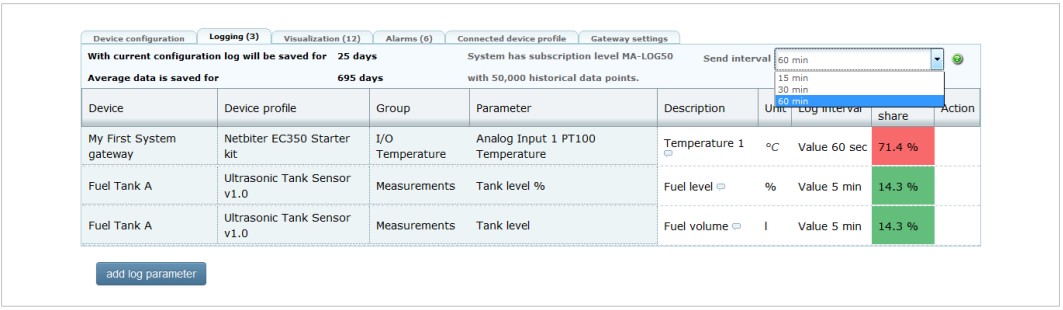


Fig. 38 Configuration – Logging

Logged parameters can be displayed on the **Historical data** page and/or on a Dashboard.

It may take up to one hour before the first logged data is sent to Netbiter Argos. For EC310 and EC350 systems it is possible to choose a send interval of 15, 30 or 60 minutes.

Device profiles can include pre-configured log parameters. Log parameters can also be added manually and then edited, cloned or removed using the links in the **Action** column. Cloning is useful for configuring several similar log parameters by copying an existing parameter and changing it as required.

Parameters that are part of a device profile cannot be edited, cloned or removed.

5.2.1 Adding a Log Parameter

1. Click on **Add log parameter**.
2. Fill in the fields as required. Some fields may have default values taken from the device template. Check the box next to the field to change the default value.

3. Click on **Save** to save the new parameter.

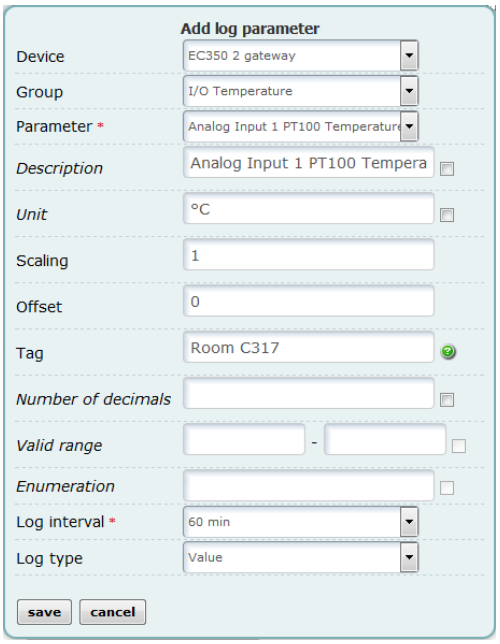


Fig. 39 Add log parameter

Log parameter fields

Device	The device that the parameter will be retrieved from.
Group	The parameter group that the parameter belongs to in the device template.
Parameter	The parameter to use.
Description	Used as a descriptive identifier. By default, the description is the name of the parameter in the template.
Unit	By default, the unit defined for the parameter in the template.
Scaling	Scales the parameter value by another value. **Example:** Parameter value = 510 and scaling value = 10 means that the resulting value will be 51.0.
Offset	Adds a value to the (scaled) parameter value. **Example**: a scaled parameter value of 51.0 plus an offset of 5.3 means that the resulting value will be 51.0 + 5.3 = 56.3.
Tag	Can be used to identify the parameter to applications using the web services API, or to differentiate between the same parameter in multiple configurations. Tags must be unique within a configuration and may not exceed 20 characters. All characters except ^ ; , & . < > | are allowed, although using only A–Z, a–z, 0–9 and _ (underscore) is recommended to ensure full compatibility.
Number of decimals	The number of decimals to use for the value.
Valid range	If the parameter value is outside of this range it will be ignored.
Enumeration	The parameter can be presented with a string corresponding to a specified value. Values are separated by semicolons. **Example:** 1=ON;0=OFF. (Blank spaces are not allowed.)

Log parameter fields (cont.)

Log interval	The log interval determines the interval between two log points. This can be from 30 seconds up to 60 minutes, depending on the subscription in the account.
Log type	**Value**: The parameter value at the time of sampling is stored. **Delta**: The difference between the current log point and the preceding one is stored. For example: Point(i) - Point(i-1) is stored. This is typically used for energy meters. **Hysteresis**: Can be used to filter out small fluctuations. See *Hysteresis Logging, p. 34*.

To experiment with the log setup and to see how long different logs will be saved for, use the **Log calculation** tool on the **Account** page.

Configuring scaling and offset values in a template or profile will make it easy to reuse the same values in multiple instances.

Clicking on **convert to visualization parameter** will convert the log parameter into a visualization parameter. See also *Configuration – Visualization, p. 35*.

Hysteresis Logging

In hysteresis logging a value will be logged only if it has changed more than the set filter value as compared to the last log point. The log will then only show the larger changes detected during the log period.

Hysteresis logging can be selected for a maximum of 4 log parameters in each system.

Example:

In a room with a thermostat set to 22 °C, the temperature will be constantly fluctuating around that temperature. It would be useful to know if/when the temperature rose to e.g. 23 °C, but not so useful to know if/when it rose to 22.15 °C, or fell to 21.80 °C. Setting a hysteresis filter value of 0.5 will cause the temperature to be logged only if it is at least 0.5 degrees above or below 22 °C (the previously logged value).

When logging using a hysteresis value it is important to note that a maximum of 50 % of the log points available for each hour will be stored. For this reason it is important to avoid setting the hysteresis filter value too low, as this may result in an excess of stored data for one portion of the log period, and less log data from the rest of the period.

The log value is always logged once every 60 minutes (at each full hour) to prevent miscalculation.

5.3 Configuration – Visualization

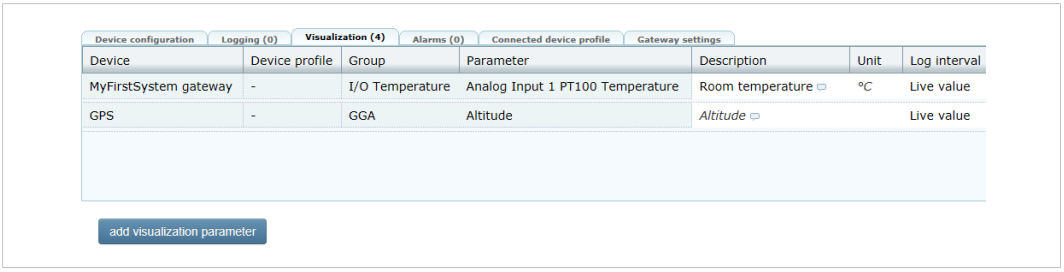


Fig. 40 Configuration – Visualization

To display a parameter value graphically on the **Overview** page or on a Dashboard, you first have to create a visualization of the value. This can be done manually or by converting an existing log parameter to a visualization, see *Configuration – Logging, p. 31*.

Device profiles can include pre-configured visualizations. Visualizations can also be created manually and then edited, cloned or removed using the links in the **Action** column. Cloning is useful for configuring several similar log parameters by copying an existing parameter and changing it as required.

Parameters that are part of a device profile cannot be edited, cloned or removed.

5.3.1 Adding a Visualization

1. Click on **Add visualization parameter**.
2. Fill in the fields as required. Some fields may have default values taken from the device template. Check the box next to the field to change the default value.
3. Click on **Save** to save the new parameter.

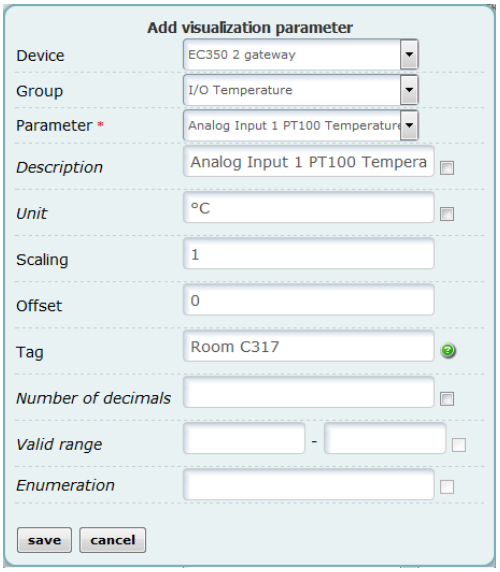


Fig. 41 Add visualization parameter

Visualization parameter fields

Device	The device that the parameter will be retrieved from.
Group	The parameter group that the parameter belongs to in the device template.
Parameter	The parameter to use.
Description	Used as a descriptive identifier. By default, the description is the name of the parameter in the template.
Unit	By default, the unit defined for the parameter in the template.
Scaling	Scales the parameter value by another value. **Example:** Parameter value = 510 and scaling value = 10 means that the resulting value will be 51.0.
Offset	Adds a value to the (scaled) parameter value. **Example**: a scaled parameter value of 51.0 plus an offset of 5.3 means that the resulting value will be 51.0 + 5.3 = 56.3.
Tag	Can be used to identify the parameter to applications using the web services API, or to differentiate between the same parameter in multiple configurations. Tags must be unique within a configuration and may not exceed 20 characters. All characters except ^ ; , & . < > | are allowed, although using only A–Z, a–z, 0–9 and _ (underscore) is recommended to ensure full compatibility.
Number of decimals	The number of decimals to use for the value.
Valid range	If the parameter value is outside of this range it will be ignored.
Enumeration	The parameter can be presented with a string corresponding to a specified value. Values are separated by semicolons. **Example:** 1=ON;0=OFF. (Blank spaces are not allowed.)

Configuring scaling and offset values in a template or profile will make it easy to reuse the same values in multiple instances.

Clicking on **convert to log parameter** will convert the visualization parameter into a log parameter. See also *Configuration – Logging, p. 31*.

5.4 Configuration – Alarms

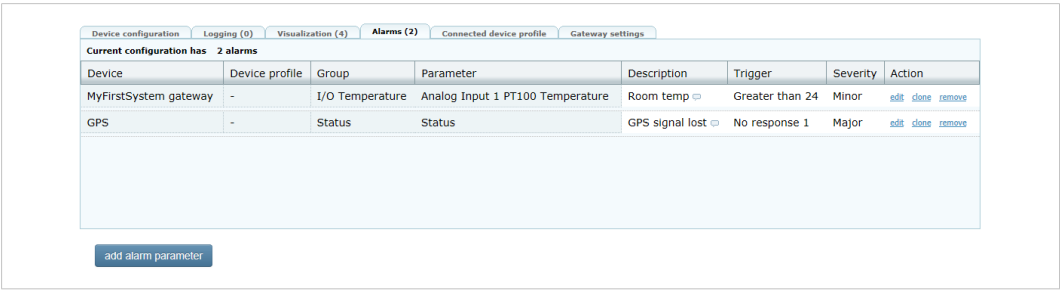


Fig. 42 Configuration –Alarms

Alarms can be generated when a certain event occurs or certain conditions are met. The alarms can be displayed on the **Overview** page or on a Dashboard, forwarded to users via SMS messaging or e-mail, or distributed via RSS feed.

Device profiles can include pre-configured alarms. Alarm parameters can also be added manually and then edited, cloned or removed using the links in the **Action** column. Cloning is useful for configuring several similar alarms by copying an existing alarm and changing it as required.

Parameters that are part of a device profile cannot be edited, cloned or removed.

5.4.1 Adding an Alarm Parameter

1. Click on **Add alarm parameter**.
2. Fill in the fields as required. Some fields may have default values taken from the device template. Check the box next to the field to change the default value.
3. Click on **Save** to save the new parameter.

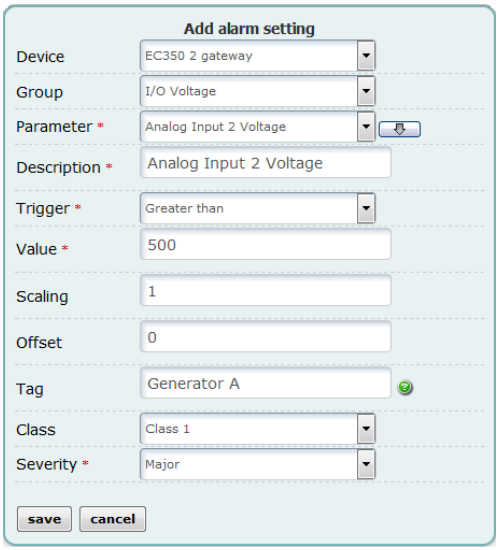


Fig. 43 Add alarm parameter

Alarm parameter fields

Device	The device that the parameter will be retrieved from.
Group	The parameter group that the parameter belongs to in the device template.
Parameter	The parameter to use. Click on the arrow button to copy the parameter name to the **Description** field.
Description	Used as a descriptive identifier. By default, the description is the name of the parameter in the template.
Trigger/Value	The condition that should trigger the alarm.

Equal to	If the parameter is equal to **Value**
Not equal to	If the parameter is not equal to **Value**
Less than	If the parameter is less than **Value**
Greater than	If the parameter is greater than **Value**
Any bit	If any bit in the parameter is equal to **Value** (0/1)
Neither bit	If neither bit in the parameter is equal to **Value** (0/1)
All bits	If all bits in the parameter are equal to **Value** (0/1)
No response	Detect if the device has lost contact. **Value** = the number of consecutive timeouts for communication with the device.

Scaling	Scales the parameter value by another value. **Example:** Parameter value = 510 and scaling value = 10 means that the resulting value will be 51.0.
Offset	Adds a value to the (scaled) parameter value. **Example**: a scaled parameter value of 51.0 plus an offset of 5.3 means that the resulting value will be 51.0 + 5.3 = 56.3.
Tag	Can be used to identify the parameter to applications using the web services API, or to differentiate between the same parameter in multiple configurations. Tags must be unique within a configuration and may not exceed 20 characters. All characters except ^ ; , & . < > | are allowed, although using only A–Z, a–z, 0–9 and _ (underscore) is recommended to ensure full compatibility.
Class	Gives the alarm a class from 1 to 10. (only for informational purposes)
Severity	Sets the severity of the alarm and adds a color coding in the alarm list.

Red	Critical alarm (active)
Orange	Major alarm (active)
Yellow	Minor alarm (active)
Cyan	Warning (active)
None	Inactive alarm
Blue	Indeterminate (default)

Configuring scaling and offset values in a template or profile will make it easy to reuse the same values in multiple instances.

5.5 Configuration – Connected Device Profile

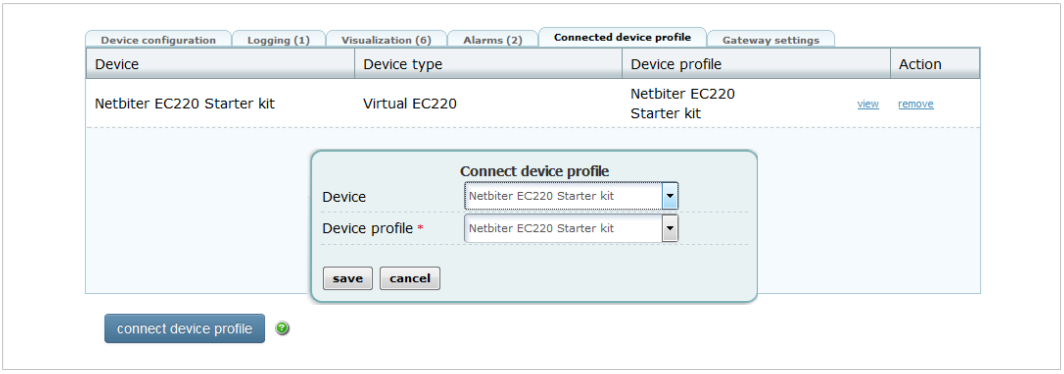


Fig. 44 Configuration – Connected device profile

When adding a device to a field system a device profile is usually added at the same time. However, profiles may also be added afterwards to an existing device.

5.5.1 Connecting a Profile to a Device

1. Click on Connect device profile.
2. Select the device.
3. Select the profile to add to the device.
4. Click on Save to connect the profile to the device.

For information on how to create a new profile, see *Creating Templates and Profiles, p. 75*.

5.6 Configuration –Gateway Settings

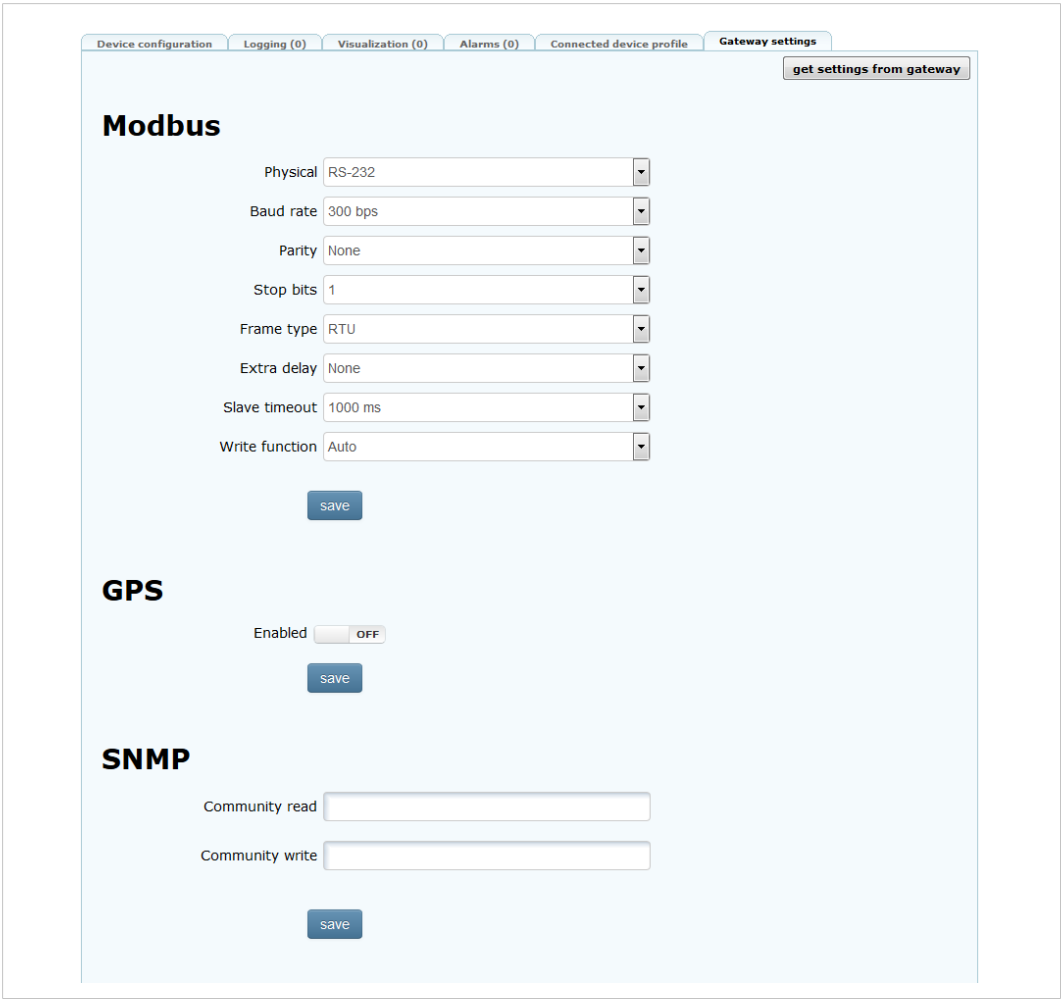


Fig. 45 Configuration – Gateway settings

These settings are used to configure how the gateway communicates with connected devices on the serial and Ethernet ports. Which gateway settings that are available depend on the functionality of the Netbiter gateway model used.

For Modbus, SNMP and GPS settings, please refer to the documentation for the connected device. EtherNet/IP communication does not require changing the gateway settings.

Some device profiles include pre-configured gateway settings.

If the gateway model supports the function, it is also possible to retrieve and use the current settings from the gateway by clicking on **Get settings from gateway**.

5.6.1 Modbus Settings

Which Modbus settings are available depends on the Netbiter gateway model.

Physical	The physical interface to use for Modbus communication.
Baud rate	The baud rate to use for Modbus communication.
Parity	The parity to use in Modbus communication.
Stop bits	The number of stop bits to use in Modbus communication.
Frame type	The format of the serial protocol.
Extra delay	Inserts an extra delay between messages.
Slave timeout	The time to wait before considering a device to have timed out.
Write function	Sets the Modbus write function to either *Always Multiple Register* or *Auto*.

5.6.2 GPS Settings (EC220/EC250)

These settings are only required when connecting a GPS receiver to a Netbiter EC220 or EC250 gateway via the RS-232 D-sub interface. The Netbiter EC350 has a built-in GPS receiver which does not require configuration.

> ! *The GPS receiver must support NMEA V3 with GGA and RMC sentence formats.*

Enabled	Sets the RS-232 D-sub port to GPS mode. The following settings will only be visible if this setting is ON.
Distance	The distance that the GPS unit can move before reporting its position to Netbiter Argos. Low values will generate a large amount of data traffic. The default value is 100 m.
Baud rate	The communication baud rate of the GPS receiver. See the documentation for the device.

5.6.3 SNMP Settings (EC150/EC250)

Community read	The password that allows the SNMP manager to read device parameters.
Community write	The password that allows write access to device parameters.

5.6.4 LAN Configuration (EC310/EC350)

These settings affect the LAN port on Netbiter EC310 and EC350. The LAN port can be used for configuration and for connections to the Ethernet network on the remote side of a tunnel connection. See also the ***Netbiter EasyConnect User Manual***.

> ! *The LAN port must be enabled when using EtherNet/IP.*

Use configuration as set locally	The LAN port will use the local configuration in the gateway.
LAN interface not in use	Disables the LAN port.
Get IP address automatically	The LAN port will get the network settings from a DHCP server on the remote network.
Manually set a fixed IP address and netmask	Allows you to enter a static IP address and netmask for the remote network. Contact your network administrator if in doubt.

5.6.5 Transparent Modbus Settings (EC310/EC350)

This function allows Modbus RTU devices to communicate with a Modbus TCP network through the Netbiter gateway.

> ⓘ *The Transparent Modbus function is not available in Remote Access mode.*

Port number	The port number to use for Modbus TCP communication. The default port is 502.
Server idle timeout	Idle timeout in seconds for the Modbus TCP connection. If the Netbiter gateway does not receive a Modbus TCP query within this time the connection will be closed.
IP authentication address	The IP address of the device allowed to connect to the Netbiter gateway.
IP authentication netmask	The subnet mask of the device allowed to connect to the Netbiter gateway.

5.7 Server Side Alarm Configuration

Netbiter Argos can generate an alarm if the system goes offline, or if the internal/external GPS receiver is moved or loses its signal.

The alarm forwarding behavior can be set on the account, project and field system levels. Projects and systems can inherit the settings from the parent or be set independently.

Offline alarms (system configuration)

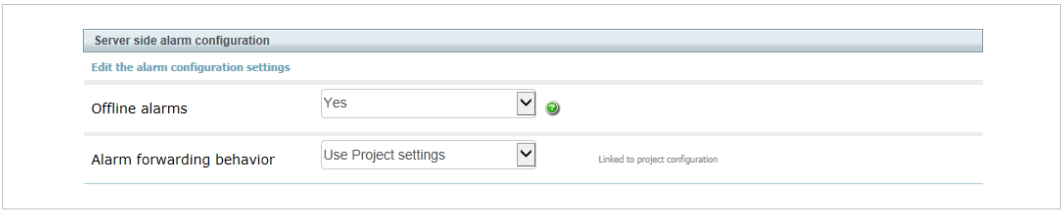


Fig. 46 Configuration – Offline alarms

Set to **Yes** to trigger an alarm if the field system loses connection with Netbiter Argos.

Alarm forwarding behavior (project and system configuration)

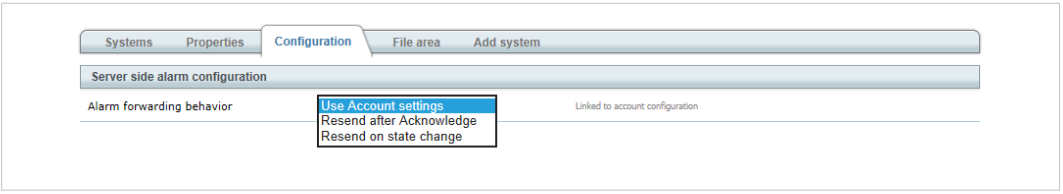


Fig. 47 Configuration – Alarm forwarding behavior

Use Project/Account settings	Inherit the settings from the parent project or from the account
Resend after Acknowledge	After the alarm has been acknowledged, a new notification will be sent when the state changes from normal to active.
Resend on state change	Alarm notifications will be resent upon a state change, even if they are not acknowledged. A maximum of 3–4 alarm notifications (the last state is always when going from Normal to Active) will be sent per hour and configured alarm. If the Alarm is acknowledged during the hour, 3–4 new alarm notifications will be sent

5.8 Synchronizing the Configuration

The final step to perform after adding or changing a configuration in Netbiter Argos is to upload the changes to the field system by clicking on the **Synchronize configuration** button the **Configuration** page. The synchronization may take some time to complete depending on the network.

If the configuration has been changed but not synchronized, the **Last synchronization** date will be shown in red.

> ! *When the communication gateway has devices connected to it, the gateway settings must be correctly set up before synchronizing the configuration.*

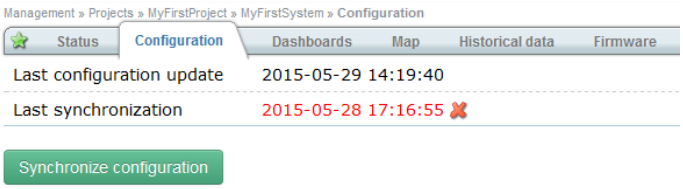


Fig. 48 Synchronizing the configuration

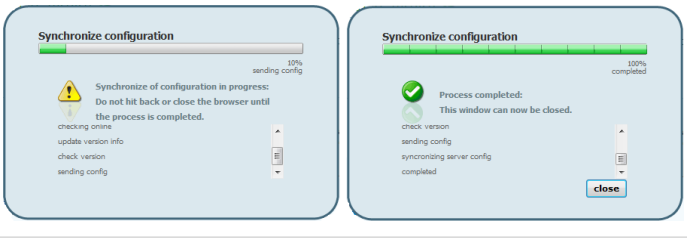

Synchronize configuration
Synchronize of configuration in progress:
Do not hit back or close the browser until the process is completed.
Synchronize configuration
Process completed:
This window can now be closed.
close

Fig. 49 Synchronization in progress

6 Projects (M&A)

In a *Manage and Analyze* account, field systems can be grouped in *projects* according to location, customer, type of installation, etc. A user can have access to one or more projects. A project can also have more than one user.

6.1 Projects – Administration

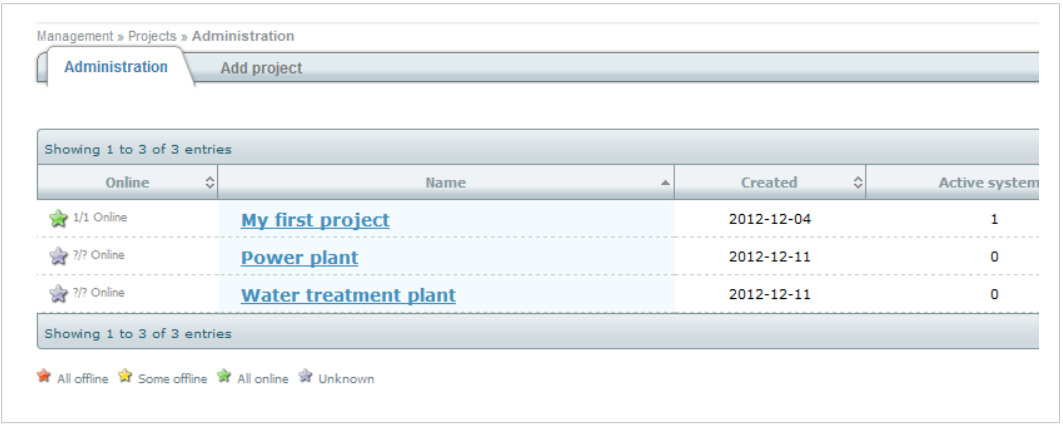


Fig. 50 Projects – Administration

The **Administration** tab provides an overview of all the projects in the account.

Online	Shows the status of the field systems in the project.	
		All field systems in this project are online.
		Some of the field systems in this project are offline.
		Every field system in this project is offline.
		The status for the field systems in this project is unknown. This might be due to no field systems existing in the account, or there may be a problem with the communication from your web browser to Netbiter Argos.
	3/4 Online	(Example) 3 out of the 4 field systems in the project are online.
Name	The name of the project. Click on the name to go to a list of all the field systems in the project.	
Created	The date when this project was created.	
Active systems	The number of active field systems connected to this project.	
Pending systems	Connected, but not yet activated systems for this project.	
Remove	All information about the project will be deleted. Note that all field systems in the project must be removed before the project can be removed.	

6.2 Projects – Add Project

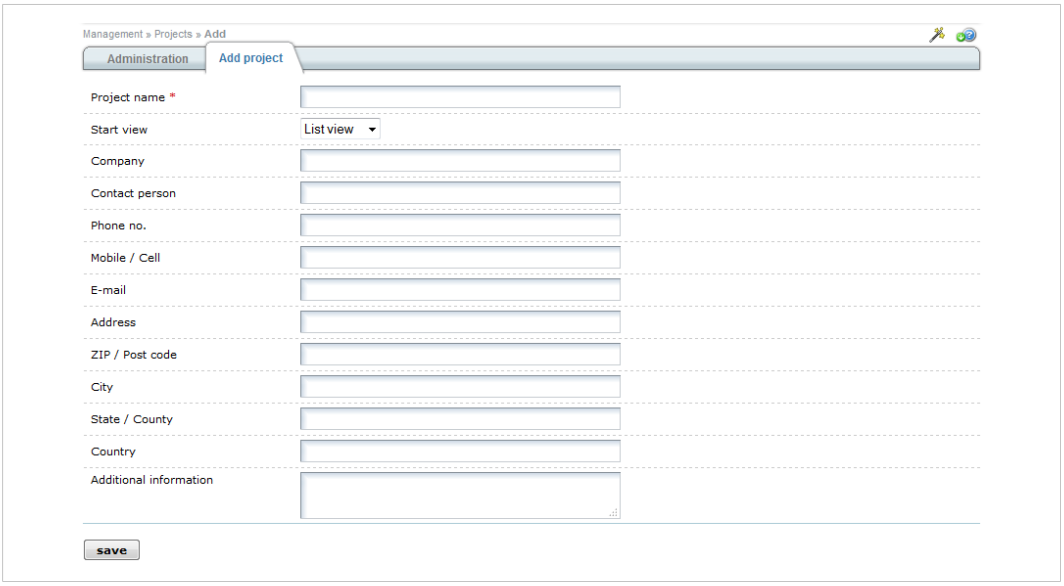


Fig. 51 Projects – Add project

Most fields are self-explanatory. Required fields are marked with an asterisk *.

Start view is the view that will be displayed when opening a project. This can be set to:

List view	Displays a list of available projects.
Map view	Displays a map with a symbol for each system. The symbol contains information about alarms and online status.

Click **Save** to add the new project to the account.

6.3 Changing a Project Configuration

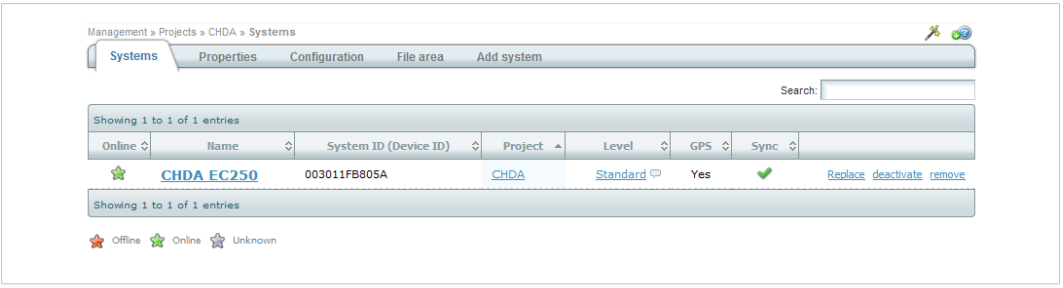


Fig. 52 Project configuration

Clicking on a project in the main list will open its configuration page with the following tabs:

Systems	Lists the field systems in the project
Properties	Allows you to add information about the project, its managers, etc.
Configuration	For setting the alarm forwarding behavior
File area	Allows files related to the project to be uploaded and stored
Add system	For adding new field systems to the project

7 Dashboards

A *Dashboard* is a customizable graphical presentation of data from field systems that are connected to Netbiter Argos. Each dashboard is available under an individual tab on the **Presentation** page.

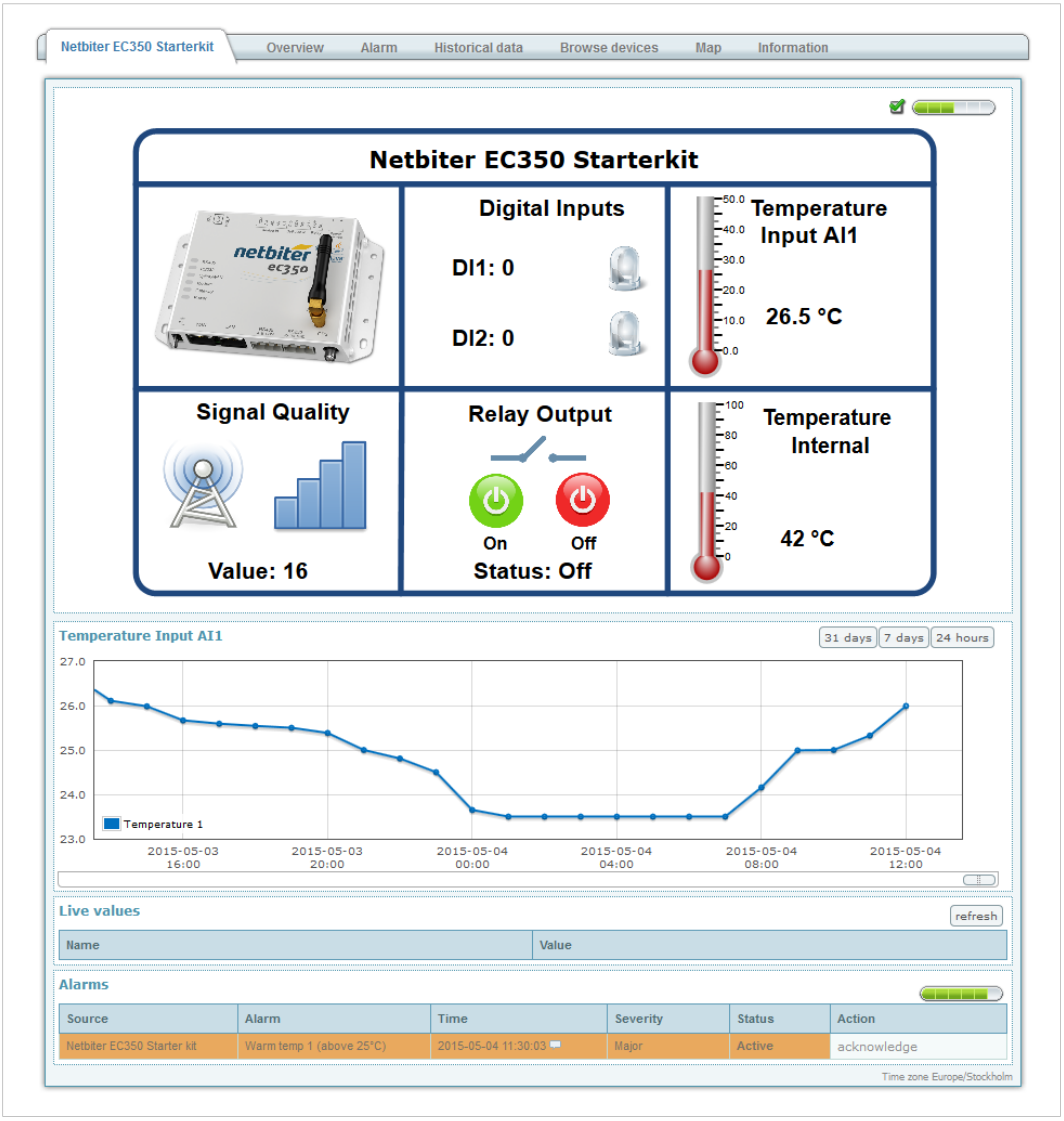


Fig. 53 Example dashboard

7.1 Dashboard Types

System Dashboard

Created for and used by a single field system.

Each system can have up to three system dashboards, where each dashboard can present up to 40 individual parameters.

Profile Dashboard

Included in a profile, available to all field systems that use the profile.

If a dashboard appears as a tab but is not found in the listing of dashboards, it is part of a device profile and cannot be removed unless the device profile is disconnected.

New profile dashboards can only be created in *Manage and Analyze* accounts.

Project dashboard (Manage and Analyze)

Basically the same as a system dashboard, a project dashboard can present data from up to 10 systems within the same project.

Each project can have up to three project dashboards, where each dashboard can present up to 40 individual parameters.

A device profile cannot be connected to a project dashboard.

7.2 Creating a Dashboard

1. In *View and Control* accounts, go to the **Dashboards** page and click **Add**. A new dashboard will be created with the default name “Dashboard”.

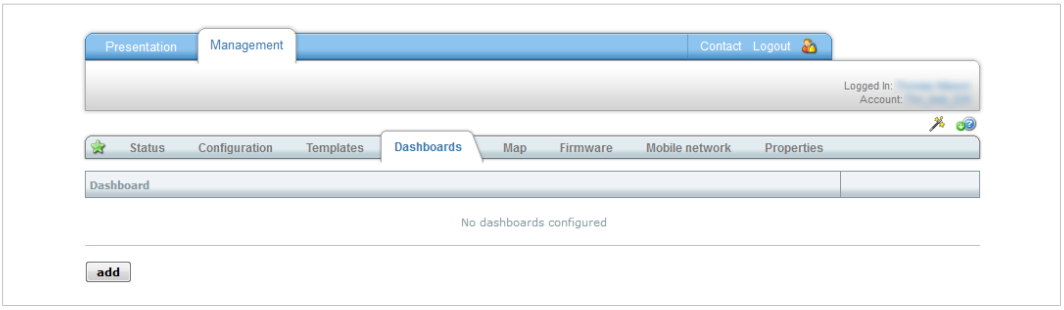


Fig. 54 Adding a dashboard (V&C)

In *Manage and Analyze* accounts, dashboards can also be created from the **Management** page by clicking on the **All dashboards** tab. Enter the properties for the new dashboard, then click Save before proceeding

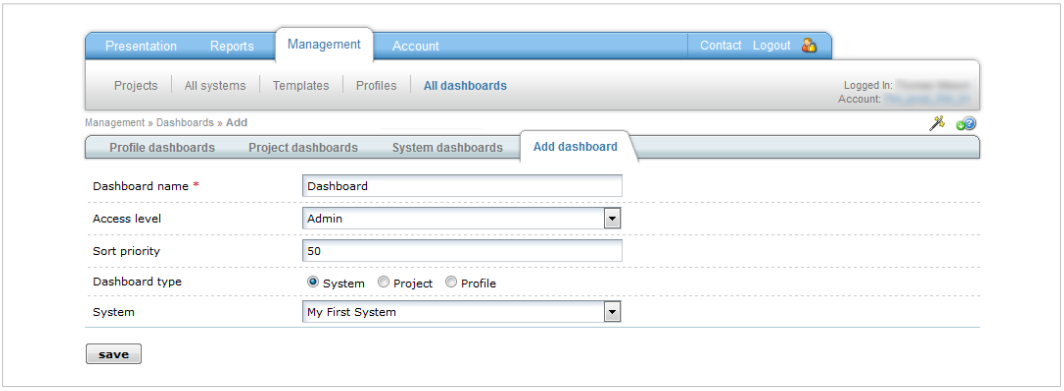


Fig. 55 Adding a dashboard (M&A)

Dashboard name	Add a descriptive name for the new dashboard.
Access level	Define which users will have access to the dashboard.
Sort priority	The position of the dashboard tab in the tab bar. A lower value will display the tab more to the left. Allowed values are 1 to 99.
Dashboard type	Choose System, Project or Profile type dashboard (only available in **All dashboards**).
Project/System	Select a project or system for the dashboard (only available in **All dashboards**).

2. Proceed to *Editing Dashboards, p. 51*.

7.3 Editing Dashboards

In the list of dashboards, click on the name of a dashboard to show the **Dashboard properties** page, then click on **Edit**.

For system and project dashboards, only the **Dashboard name**, **Access level** and **Sort priority** properties are editable. For profile dashboards, you can also add and remove profiles to the dashboard, although there has to be at least one connected profile.

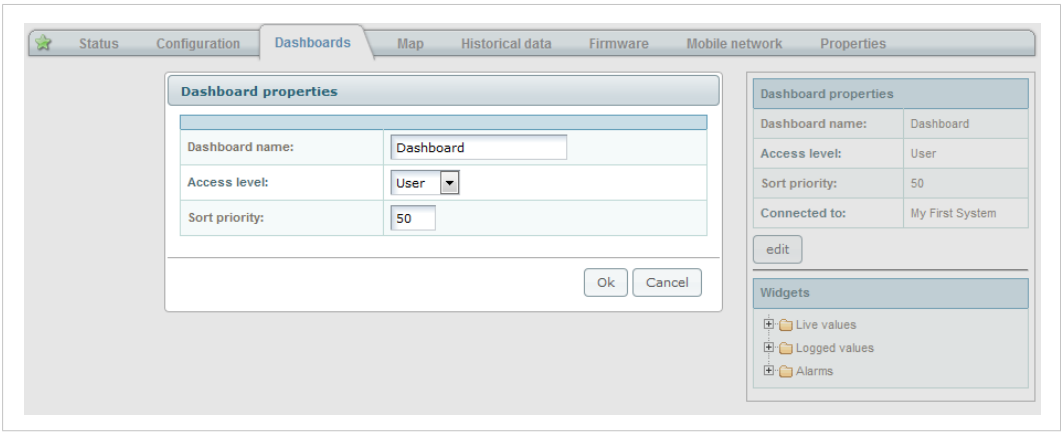


Fig. 56 Editing a dashboard

The next step is to add some widgets to the dashboard. Widgets are graphical user interface elements that can present live and logged parameter data as text, graphs or animations in various forms. The widgets can be reordered on the page using drag-and-drop.

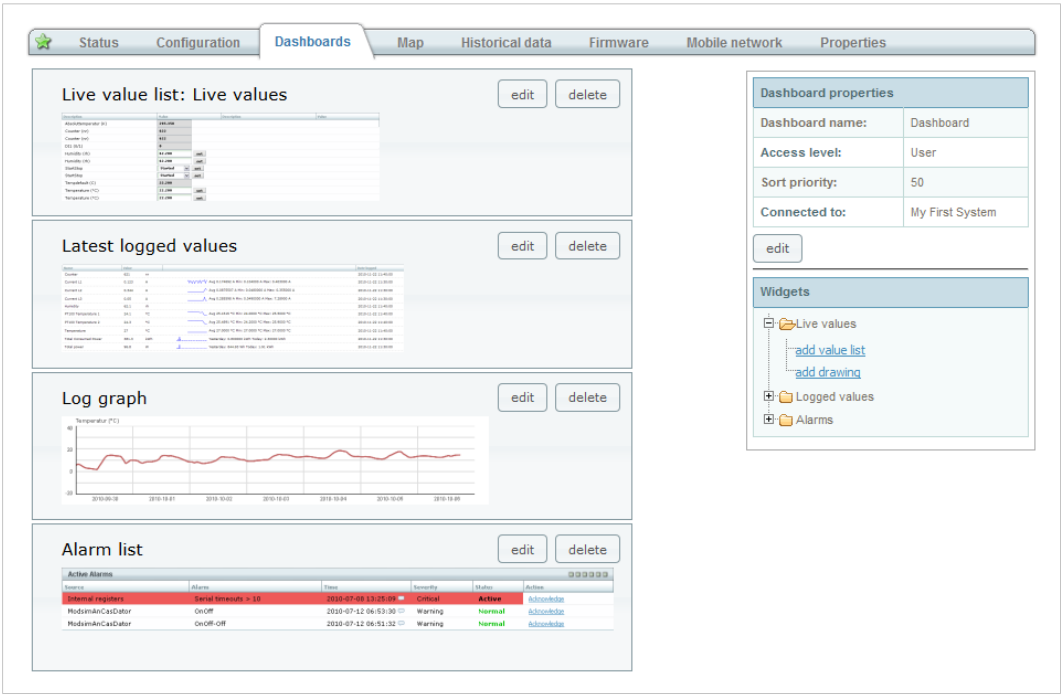


Fig. 57 Adding widgets to a dashboard

7.3.1 Adding a Value List Widget

This widget provides a simple listing of parameter data.

1. In the **Widgets** dialog, expand the directory tree for **Live values** and click on **Add Value List**. A list type widget will be added to the dashboard layout.

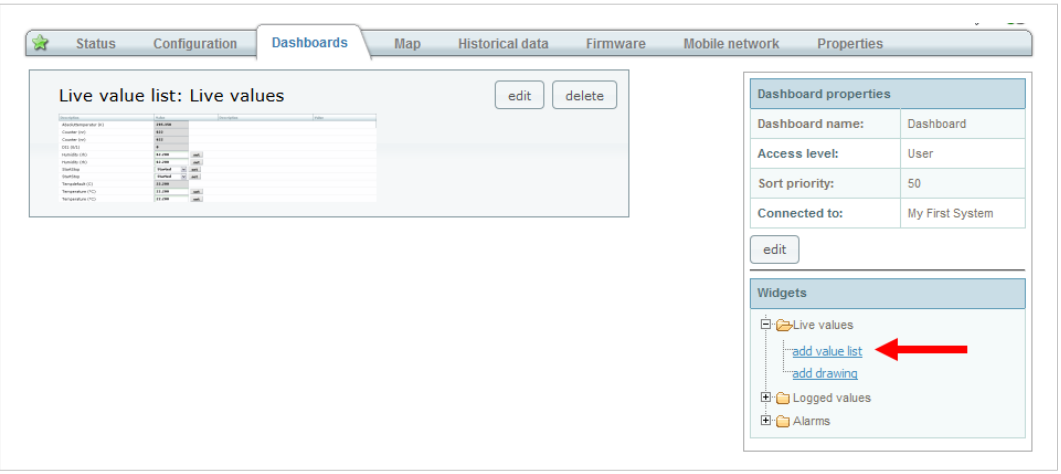


Fig. 58 Adding a value list widget

2. Click on the **Edit** button in the widget to open the **Settings** dialog, where you can name the widget, set the update interval (see next step), and **Add** parameters.

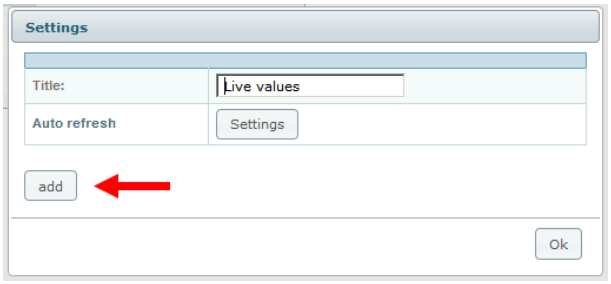


Fig. 59 Editing the live values list

3. Click on **Add** and select a parameter from the directory tree, then click **OK**.

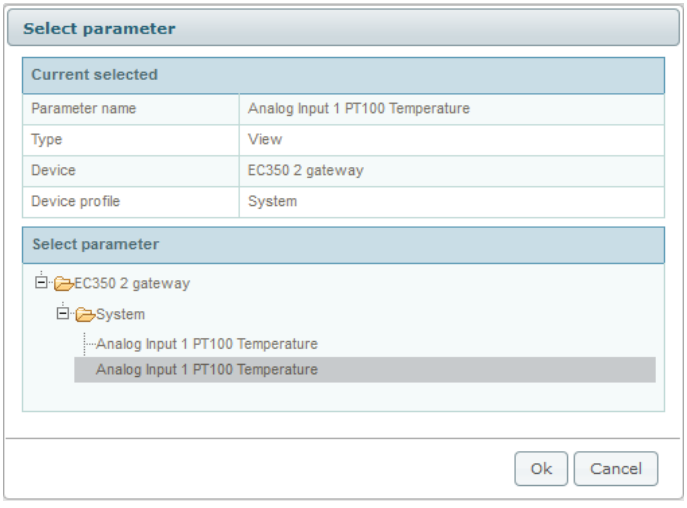


Fig. 60 Adding a parameter

4. In the **Settings** dialog, click on **Auto refresh – Settings** to configure the auto refresh interval.

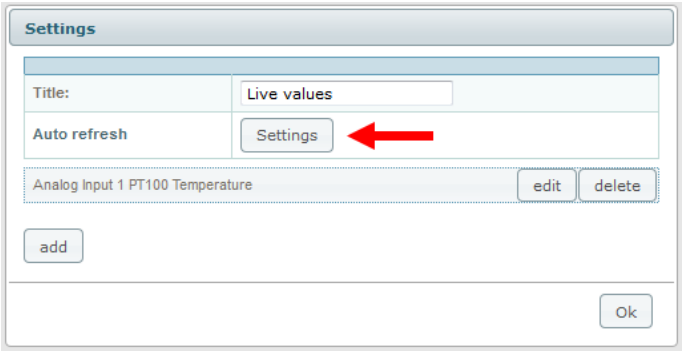


Fig. 61 Settings dialog

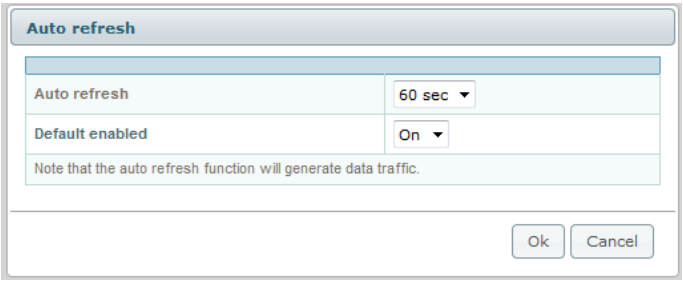


Fig. 62 Auto refresh settings

If **Default enabled** is set to **Off**, the checkbox next to the auto refresh indicator on the dashboard page must be checked to enable auto refresh.

Enabling auto refresh will increase the amount of data transfer on the network. Selecting longer refresh intervals or disabling auto refresh will save money on a mobile network connection where the network operator charges by data amounts transferred.

5. Click **OK** in this and the next dialog to save your changes.

The dashboard can now be opened from its tab on the **Presentation** page.

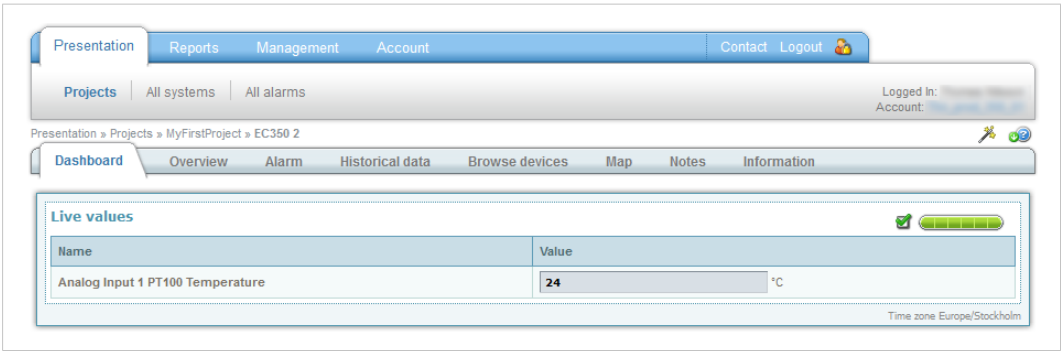


Fig. 63 The finished dashboard

In this example we added just a single parameter to the value list widget. Repeat the process to add more parameters to the value list.

7.3.2 Logged Values Widgets

Logged values can be presented as lists or graphs. Depending on the log interval, the latest logged value may be up to an hour old.

Adding a Logged Values List Widget

1. Expand the directory tree for **Logged values** and click on **Add Latest Logged**. A logged values list type widget will be added to the dashboard layout.

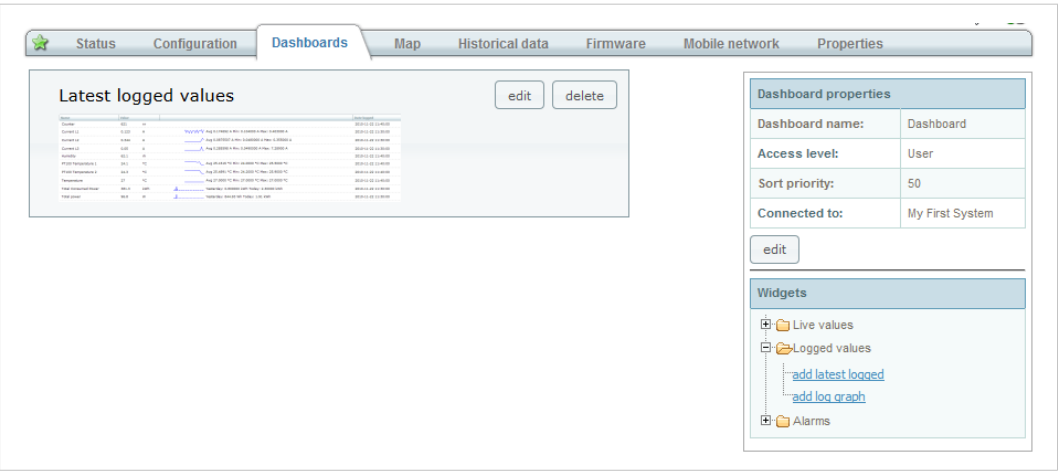


Fig. 64 Adding a logged values list widget

2. Click on the **Edit** button in the widget to open the **Settings** dialog.

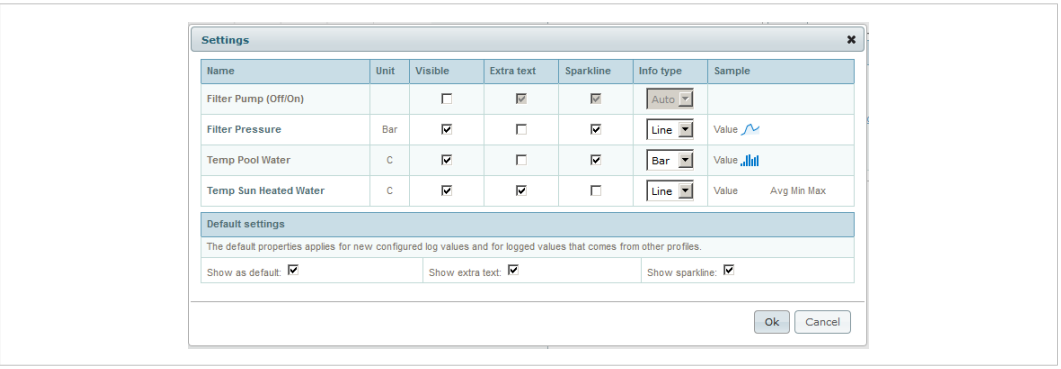


Fig. 65 Logged values widget settings

Visible	Select if the parameter should be visible in the dashboard.
Extra text	Display additional information for the parameter.
Sparkline	Display a sparkline (small line chart) next to the parameter value.
Info type	Select a line or bar type sparkline. If set to **Auto** Netbiter Argos will select the best type for the parameter.
Default settings	Use these settings as the default for any new logged parameter.

3. Set the parameters as needed and click **OK** to save the settings.

Adding a Log Graph Widget

1. Expand the directory tree for **Logged values** and click on **Add Log Graph**.

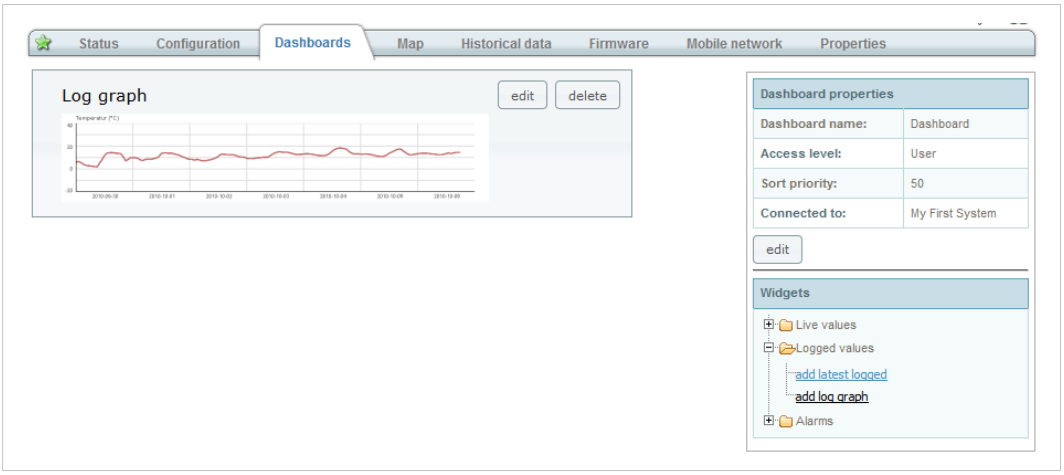


Fig. 66 Adding a log graph widget

2. Click on the **Edit** button in the widget to open the **Settings** dialog.

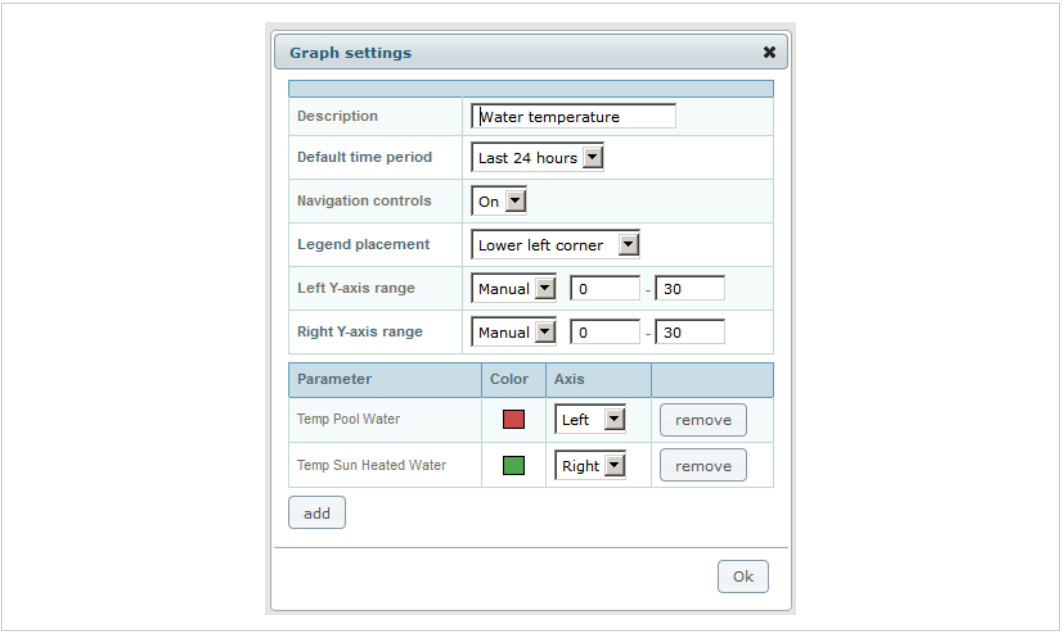


Fig. 67 Log graph widget settings

Description	The title to be displayed above the graph.
Default time period	The initial viewing time range. This can be changed when viewing the dashboard.
Navigation controls	Toggles the scroll bar under the graph.
Legend placement	The position of the explanatory legend.
Left/Right Y-axis range	Set to **Auto** to use the parameter's range, or set the ranges manually. The left and right Y-axis ranges can be set independently.
Add	Click **Add** to select the parameters to use in the graph widget. For each added parameter, select the Y axis to use and select a line color.

3. Set the parameters as needed and click **OK** to save the settings.

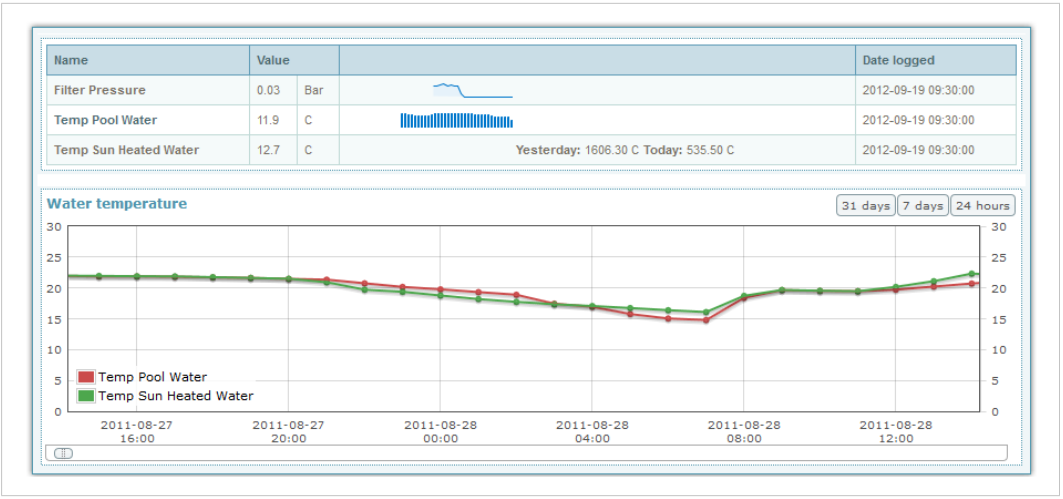


Fig. 68 Logged values list and graph widgets on dashboard

Log Graph Widget Controls

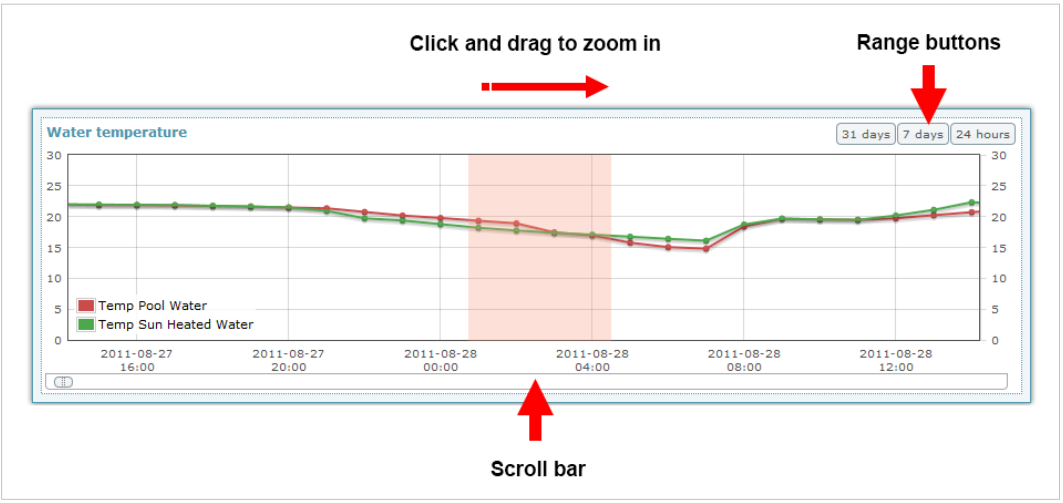


Fig. 69 Log graph widget

Log Graph Widget Controls

- The default time range is set in the configuration. Click on one of the range buttons at the top right to change the displayed time range.
- To jump to a particular point in time, simply click on the timeline. Alternatively, click and drag along the timeline.
- To see detailed log data, click and drag an area on the graph to zoom in. Repeat to zoom in further. The zoom level is retained when scrolling in this view.
- To return to the default view, click on one of the range buttons at top right.

7.3.3 Adding an Alarm List Widget

The alarm list widget type shows a simple list of all available alarms for the system.

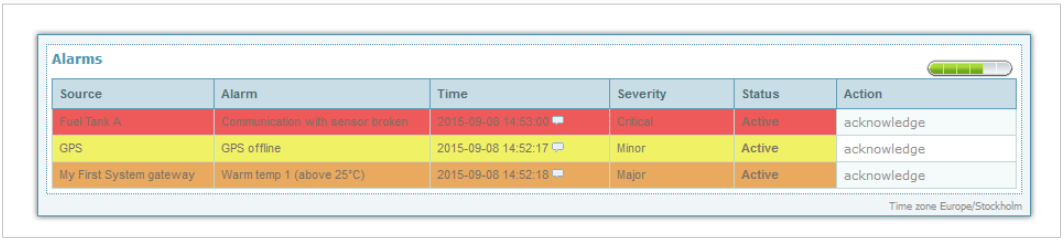


Fig. 70 Alarm list widget on dashboard

- To add an alarm list widget, expand the directory tree for **Alarms** and click on **Add Alarm List**. No configuration is needed for this type of widget.

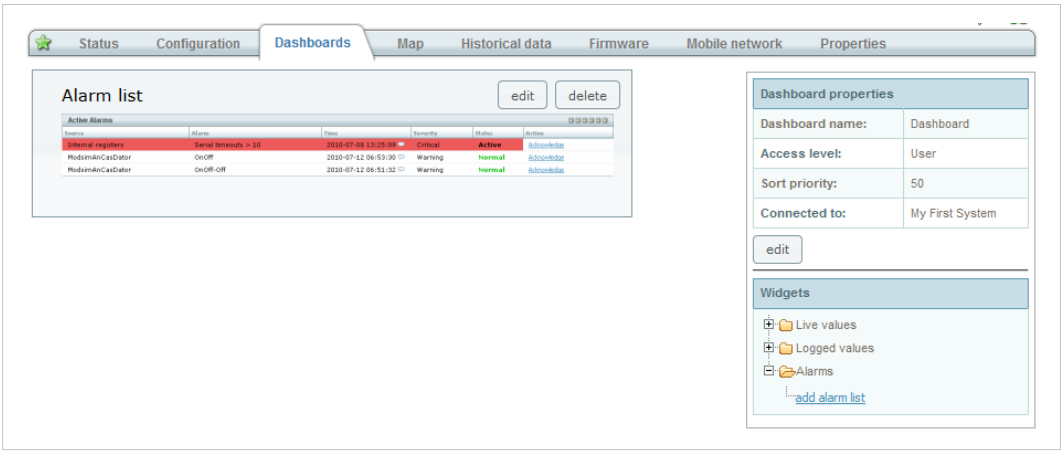


Fig. 71 Adding an alarm list widget

7.3.4 Adding a Drawing Widget (Live Values)

It is possible to create user-defined dynamic and interactive visualizations of a field system or project using a *Drawing Widget*. This widget type uses graphic and text elements to represent live values from parameters in system devices. For example, a tank level parameter can be linked to an image of a tank with an animated level indicator which moves with the level value. Each dashboard can present up to 40 live values.

1. Expand the directory tree for **Live Values** and click on **Add Drawing**.

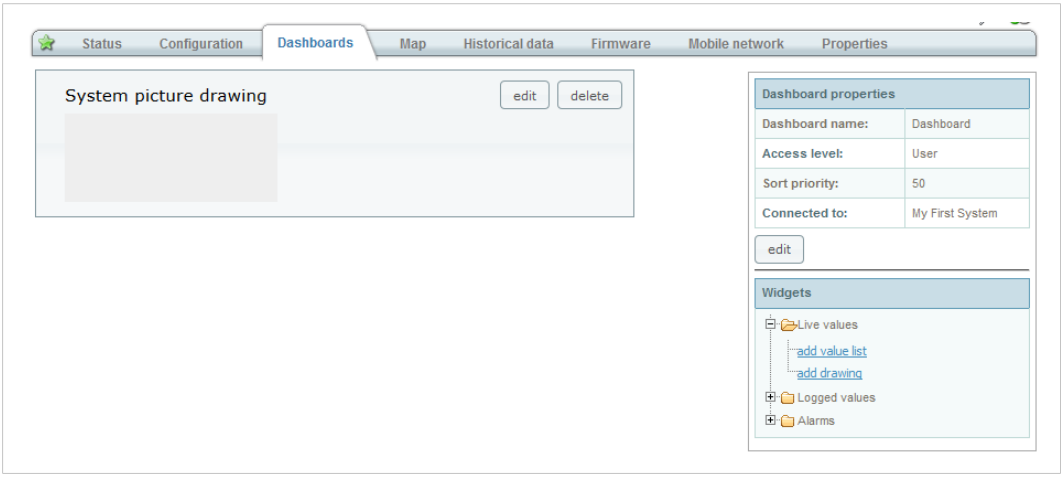


Fig. 72 Adding a drawing widget

2. Click on the **Edit** button in the widget to open the drawing area.

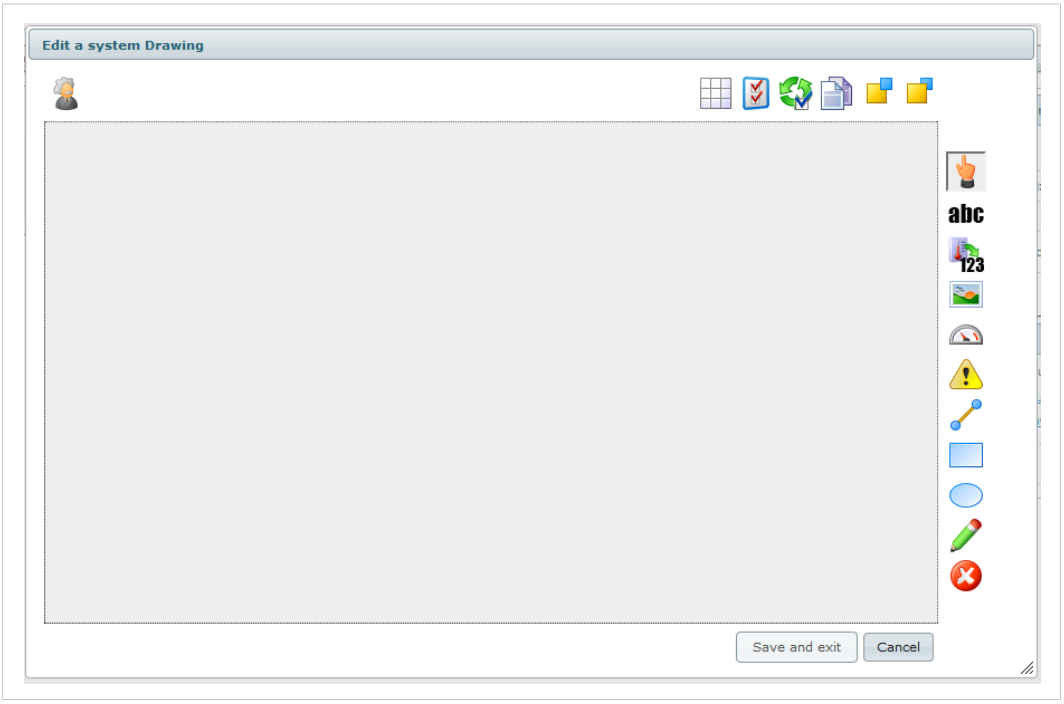


Fig. 73 Drawing area

> ! *If Netbiter Argos times out you will lose any changes to a drawing that has not been saved. Make a habit of saving the drawing regularly while editing.*

Drawing Tools Overview

	Advanced mode	Enables the **Save**, **Save as**, **Add saved drawing** and **Clear all** tools
	Save	Saves the drawing without exiting the drawing tool.
	Save as	Saves the drawing as a component in your account. A saved component can be reused as a starting point to save time when creating new drawings.
	Add saved drawing	Loads a saved drawing/component for editing. You can also load components from the Public Library and edit them. If all you want to do is add a component without editing, use the **Component** drawing tool instead.
	Clear all	Removes all objects from the drawing.
	Snap to grid	When enabled, objects will snap to the grid as they are created, moved and resized.
	Drawing settings	Edit the name of the drawing and the height of the drawing area.
	Autorefresh settings	If **Default enabled** is set to **Off**, the checkbox next to the auto refresh indicator on the dashboard page must be checked to enable auto refresh.
	Copy object	Creates a copy of the selected object on the drawing.
	Send to back	Each object in the drawing is on its own layer. Click this button to move the object/layer to the back of the drawing. This means that another object can be placed in front of it.
	Send to front	Click this button to move the object/layer to the front of the drawing. This means that another object can be placed behind it.
	Selector	Click to select an object in the drawing. Click and drag to move the object. When the mouse pointer changes to an arrow you can click and drag to resize the object.
	Label	A static text label. Double-click to edit its properties. Can be positioned anywhere, and the size of the label is automatically adjusted to changes in the font, the font size, etc.
	Parameter text	The same as a static label, except that it can be linked to a system parameter to display its value.
	Image	Adds an image from the image library onto the drawing. Images can be positioned and sized.
	Component	Animated gauges, tanks, meters, etc. can be added to a drawing and linked to system parameters. If no parameter is linked, the component will be a static image. You can create your own dynamic and static components in *Advanced Mode*, or use the components available in the public library.
	Alarm	By default this graphic will represent a summary alarm, and will show the current system alarm with the highest level of severity. It is also possible to specify an alarm to show from a list of configured alarms for the system. Alarms are color-coded, based on severity. The absence of active alarms will be displayed as green.
	Connection	Used to connect items in a drawing to show relationships between them. These can be repositioned by clicking and dragging on their end nodes. End nodes will automatically attach to any other end nodes nearby, allowing connections to be dragged without having to reconnect them. A system parameter can be assigned to a connection and cause it to act as a gate, i.e. it will open when the parameter has one value and close when it has another.
	Draw rectangle	Draws a rectangle. Fill color, opacity and a gradient fill can be set.
	Draw ellipse	Draws an ellipse. Fill color, opacity and a gradient fill can be set.
	Draw line	Draws a line or a filled area. Line and fill color, opacity, and a gradient fill can be set.
	Delete	Removes the selected object from the drawing.

7.3.5 Adding Objects to a Drawing Widget

Static label, **Parameter text**, **Image**, **Component** and **Alarm** objects are added to a drawing by first selecting the tool, and then clicking inside the drawing area to place the object.

Draw and **Connection** objects are added by clicking and dragging in the drawing area.

- To resize an object, click and drag its edges. To resize while retaining proportions, click and drag one of the corners. Some objects cannot be resized manually.
- To edit the properties of an object, double-click on it. When the properties dialog is open, you can switch to editing the properties of another object by selecting it.
- To delete an object from the drawing, select it and click on the delete icon or press the **Delete** key on your keyboard.

Label

abc

Select the tool, then click in the drawing area to create a static text object. Double-click on the object to edit its properties.

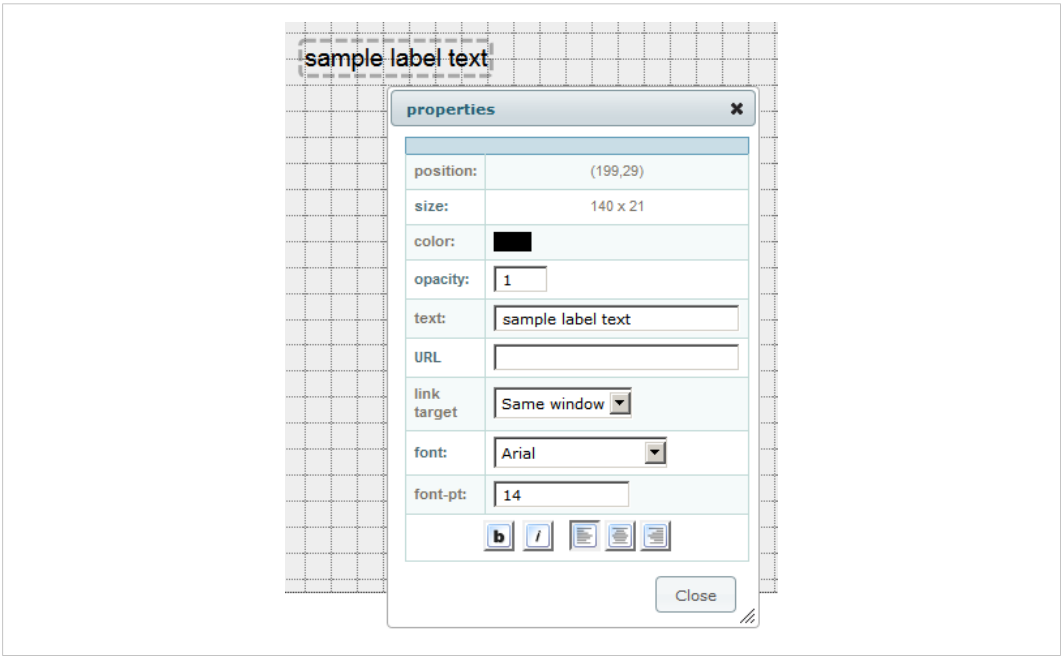


Fig. 74 Label object properties

color	Click on the colored square to change the text color.
opacity	Select a value between 0.0 (transparent) and 1.0 (opaque).
text	The label text.
URL	Enter a URL here if the object should act as a hyperlink.
link target	Defines if the URL link should open a new tab in the browser.
font	The font to use for the label
font-pt	The font size in points

Parameter Text

Select the tool, then click in the drawing area to create a dynamic text object. Double-click on the object to edit its properties.

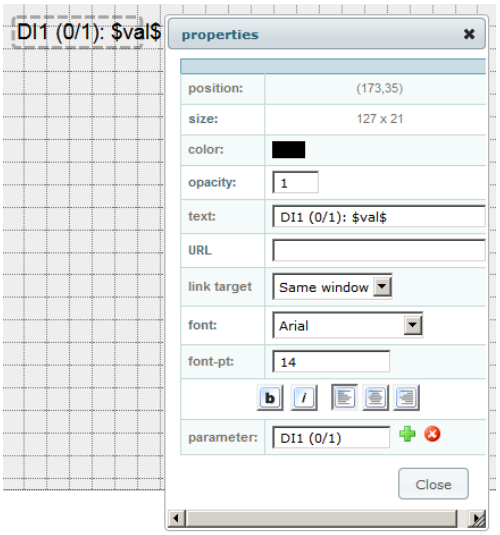


Fig. 75 Parameter text object properties

color	Click on the colored square to change the text color.
opacity	Select a value between 0.0 (transparent) and 1.0 (opaque).
text	When a parameter is connected (see below) any text in this field will replaced with “<parameter name>: val”where “val” is the parameter value. The text can then be edited, and the parameter value can be placed anywhere in the string (unless the parameter is writable).
URL	Enter a URL here if the object should act as a hyperlink.
link target	Defines if the URL link should open a new tab in the browser.
font	The font to use for the label
font-pt	The font size in points
parameter	Click on to select a parameter to connect to the object. Some parameters can be set as *writable*. Allowed values will then be available as a drop-down list in the dashboard. For writable parameters you cannot add text before or after “val” in the text field.

Image

The **Image** button will open a window where you can select files from the image library associated with your Netbiter Argos account, **My Images** (the left column), or from the global **Public Library** (right column).

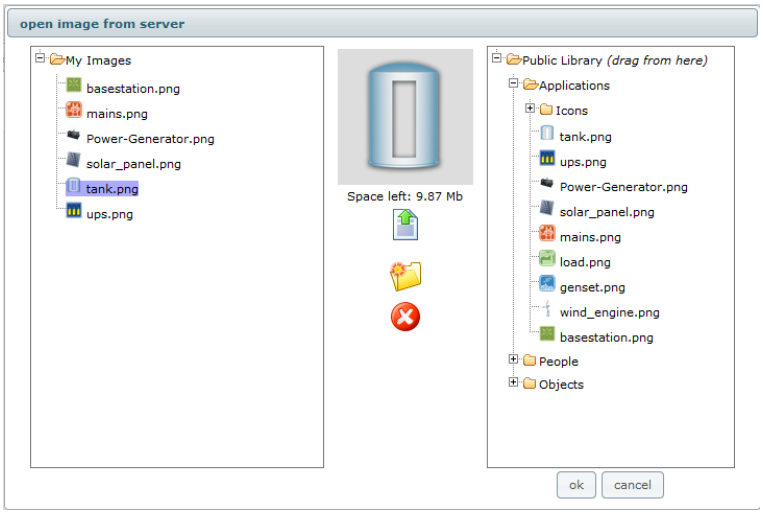


Fig. 76 The image file manager

Double-clicking on an image file will add it to the drawing. Double-clicking on an image file in the **Public Library** will add it to the drawing and also copy it to **My Images**.

You can upload files from your computer to **My Images** by clicking on . You can also create additional folders by clicking on . To delete a file or folder, select it and click .

To copy an image to **My Images** without adding it to the drawing, select (single-click) an image and click on or simply click-and-drag from the right column to the left.

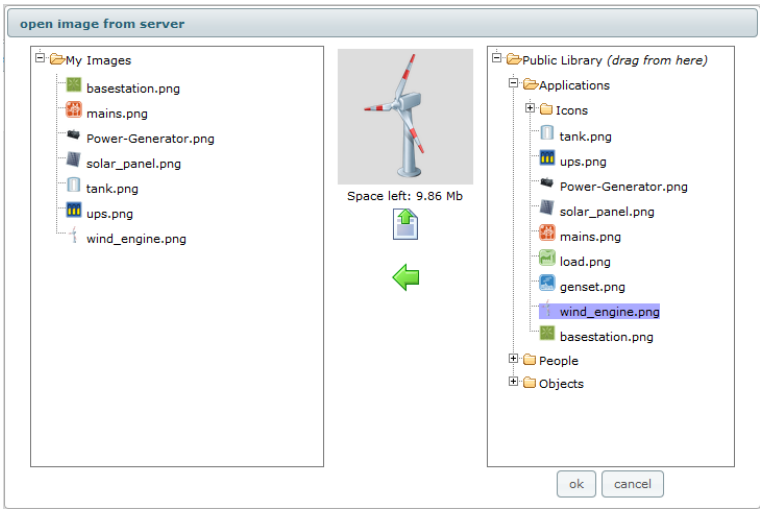


Fig. 77 Copying images from the Public Library

Editing an image in a drawing

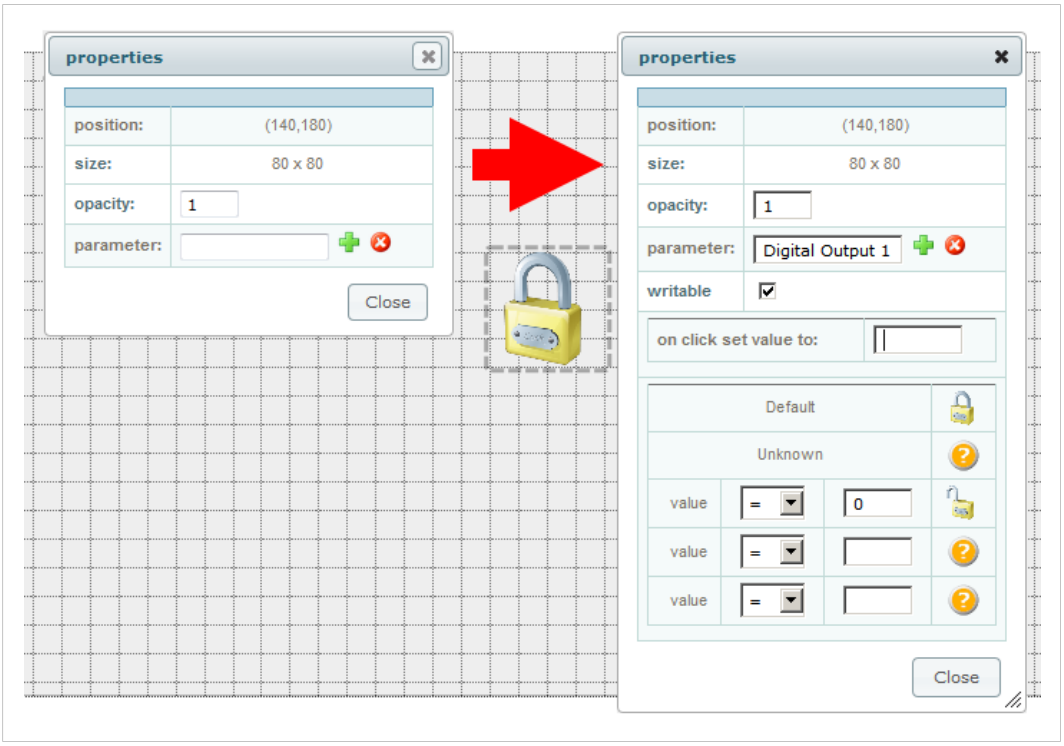


Fig. 78 Image object properties

Double-click on the image in the drawing to open the **properties** dialog.

opacity	Select a value between 0.0 (transparent) and 1.0 (opaque).
parameter	Click on + to select a parameter to connect to the image. Some parameters can be set as *writable*. Allowed values will then be available as a drop-down list in the dashboard.
on click set value to	Clicking on the image will write this value to the parameter. (only available if **writable** is checked)
Default	Image to use for the default state of the parameter.
Unknown	Image to use when the parameter state is unknown.
value	Set an operator and a value for the parameter state when the corresponding image should be shown.

In this example we will link the padlock image to a parameter for a digital output.

Click + and select the desired parameter. The properties dialog will now show the options for connecting the parameter to the drawing.

The current image will be used for the **Default** state of the parameter. The other states have an image with a question mark. For the **Unknown** state we decide to keep that image. For **value = 0** we want a different image, an open padlock. Click on the question mark image to open the image manager and select the open padlock image.

Click on **Close** when finished.

Component

Component objects can be animated by the value of a connected parameter. If no parameter is connected to the component it will just appear as a static image.

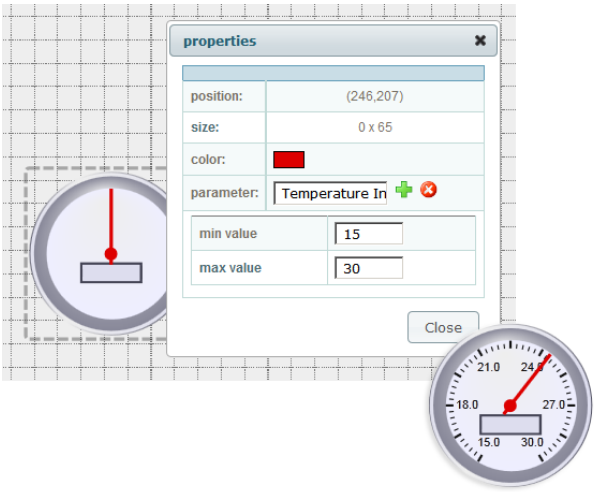


Fig. 79 Component object properties

color	Click on the colored square to change the color of the animated part (needle, etc.).
parameter	Click on ✚ to select a parameter to connect to the component. The retrieved value will animate the component in proportion to the **min** and **max** values.
min value	The value corresponding to the minimum position of the animated part.
max value	The value corresponding to the maximum position of the animated part.

The *Public Library* in Netbiter Argos contains many different types of dynamic components such as gauges, tanks and meters. You can also create your own components and upload them in *Advanced Mode*, see *Drawing Tools Overview, p. 59*.

Fig. 80 Examples of component objects

Alarm

Alarm objects in a drawing are connected to the configured alarms in the field system. When adding a new alarm object it defaults to reading a *summary* value of all configured alarms, and indicate the alarm with the highest severity.

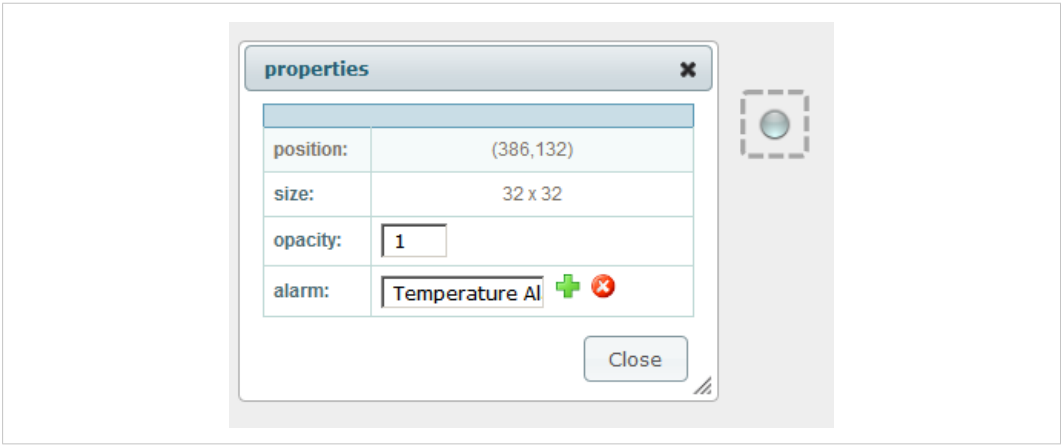


Fig. 81

opacity	Select a value between 0.0 (transparent) and 1.0 (opaque).
alarm	Click on ✚ to select a single alarm to connect to the alarm object. To return to summary alarm mode, click the delete icon ✖.

Connection

Connection objects can be used to visualize relationships between other objects in the drawing. A system parameter can be assigned to a connection and cause it to animate like a gate, opening and closing depending on the parameter state.

Select the tool and then click and drag in the drawing area to create a connection. Click on an endpoint to move it. Dragging an endpoint over another endpoint will connect them.

Double-click on a connection to open its properties dialog.

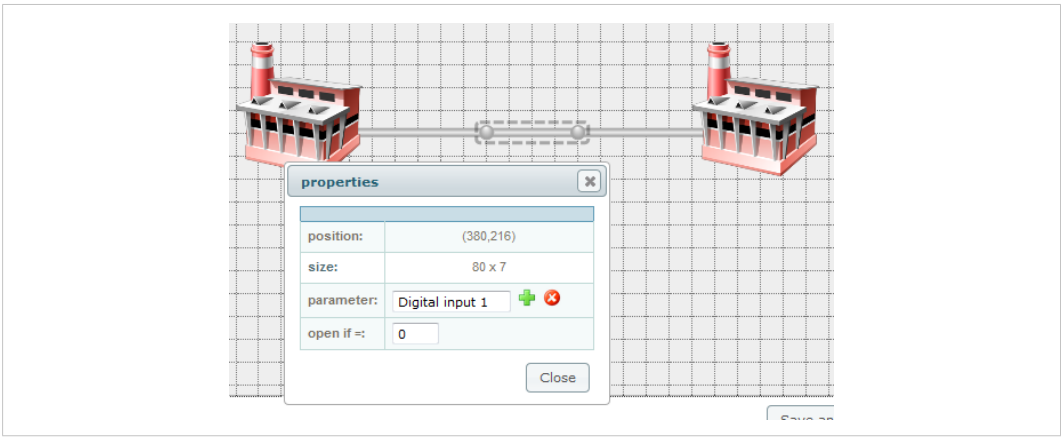


Fig. 82 Creating a connection

parameter	Click on ✚ to select a parameter to assign to the object.
open if =	The parameter value which will make the connection open.

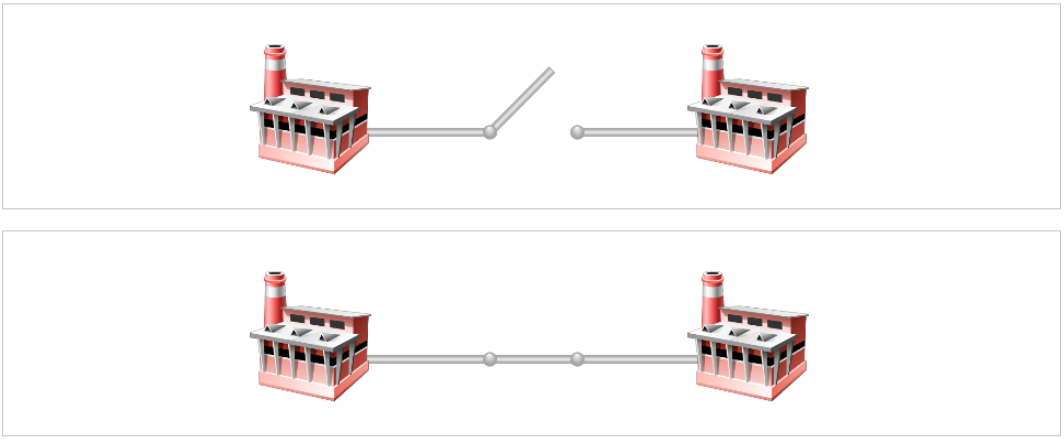


Fig. 83 The animated connection on a dashboard

Rectangle/Ellipse

Select the tool, then click and drag to create the object. Double-click on the object to edit its properties.

To resize the object, click and drag the **edges**. To resize while keeping the proportions, click and drag the **corners**.

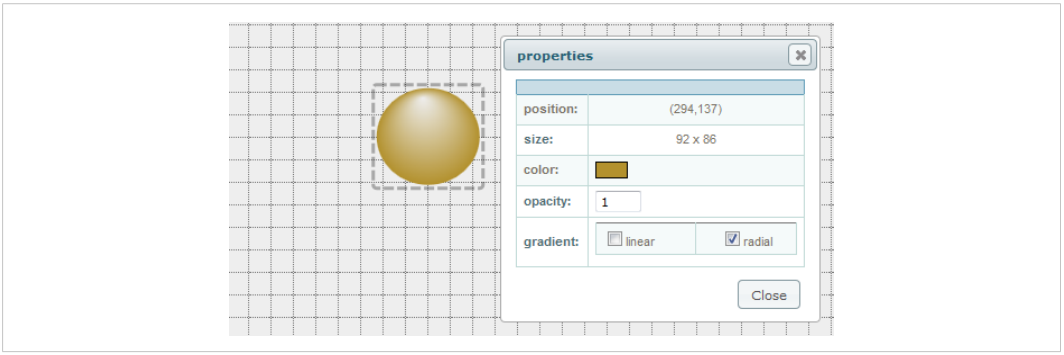


Fig. 84 Ellipse object properties

color	Click on the colored square to change the fill color.
opacity	Select a value between 0.0 (transparent) and 1.0 (opaque).
gradient	Add a linear gradient fill. Ellipses can also have a radial fill.

Line

Select the tool, then click and drag to create a line. Double-click on the line to edit its properties.

A line cannot be modified after drawing it, you have delete it and draw it again.

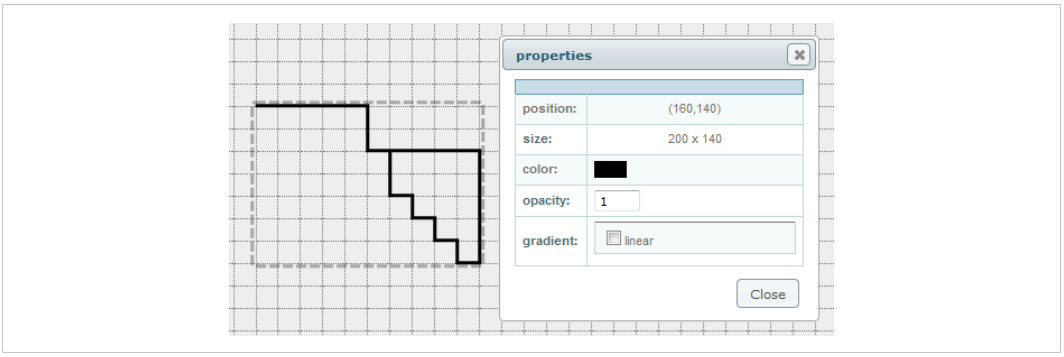


Fig. 85 Line object properties

color	Changes the line into a filled area and allows you to select the **fill** color. To change the **line** color you first have to create a line and assign it a fill color. The next line object you create will have the same line color as the fill color of the previous line.
opacity	Select a value between 0.0 (transparent) and 1.0 (opaque).
gradient	Changes the line into an area with a linear gradient fill.

When **snap to grid** is enabled, the line will follow the grid while being drawn.

8 Reports (M&A)

Reports are used to collate and present data from Netbiter Argos in a downloadable format such as PDF or XLS (Excel spreadsheet). Reports can be formatted in many different ways and can contain plain text, lists, and graphs.

Reports can be run manually or generated automatically at regular intervals. A notification can be sent to the account administrator whenever a report is generated.

Depending on the report type, the data can be sourced from:

- the same parameter in different systems,
- different parameters in different systems,
- different parameters in the same system, or
- different systems.

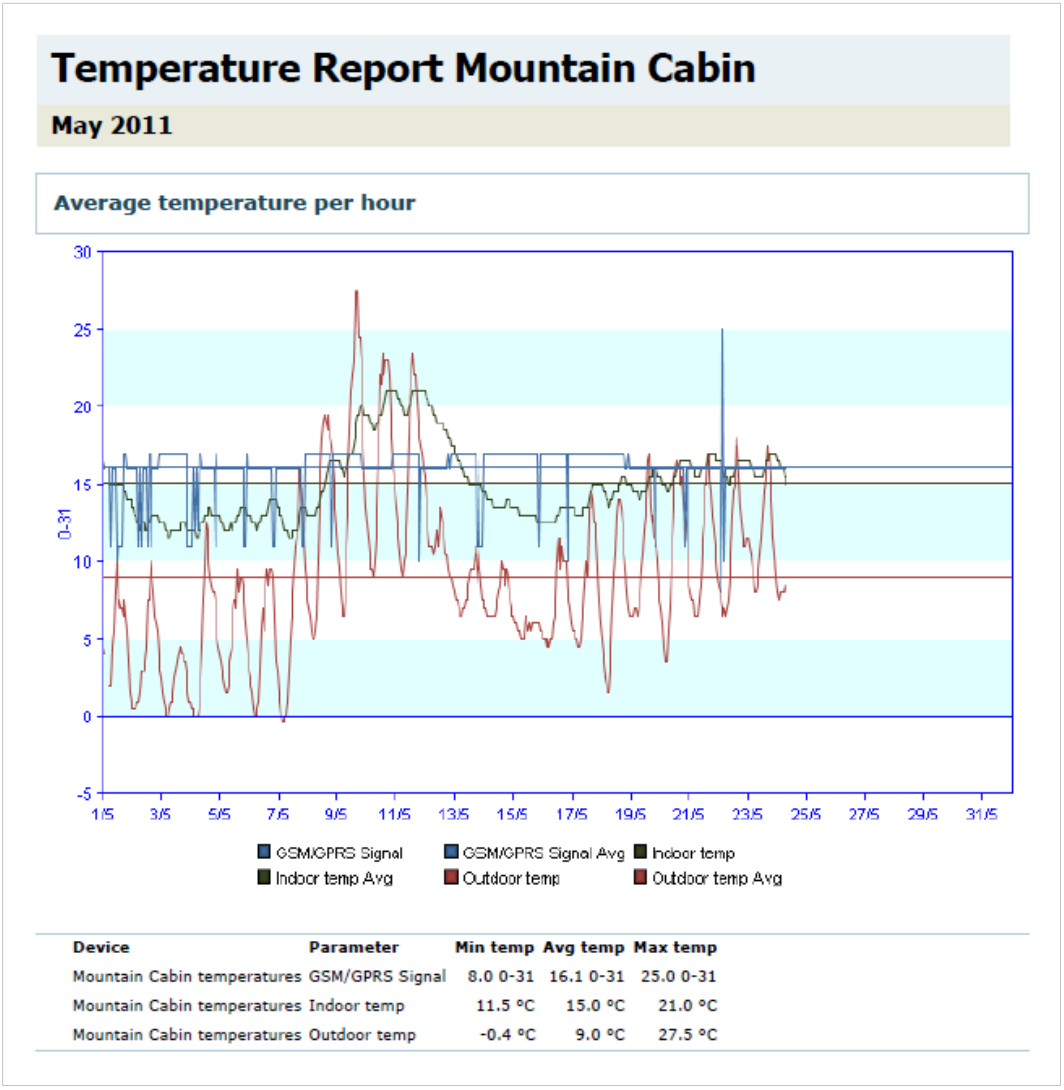


Fig. 86 Example report

8.1 Report Types

Account Report

This is one of the simplest reports available in Netbiter Argos. It consists of the following components (each section can be enabled/disabled as desired):

- Overview of the projects in the account and the number of attached field systems
- Contact information for the projects
- Listing of users in each project and their access rights
- Basic information about all users
- Contact information for all users
- Basic information about all field systems including their subscription status

Online Report

Shows the online history for each field system in the form of graphs and listings.

Online and offline dates/times and durations can also be listed in detail.

Export Data Report

Exports data for selected field systems in a single zip archive, in which each system is included as an individual XLS (Excel spreadsheet format) file.

The XLS file for each system can be set to include data at one of the following levels:

- Detailed data
- Average data
- Average data and min/max

Energy Report, Consumption Report

Contains lists and graphs of consumption values. These are selected parameter by parameter from the field systems in the account. There is also support for using different tariffs for different time periods.

Tank Volume Report

Contains data lists and graphs suitable for displaying tank volumes. This report allows the selection of any field system parameter, although the obvious parameter to include would be a tank volume as a percentage.

Temperature Report, Trend Report

Presents temperature/trend data as graphs and as min/max and average values.

Compare Report

This report is suitable for generating comparative graphs and lists involving multiple field system parameters.

8.2 Which Report Should I Use?

As reports can be constructed in many different ways it is not possible to provide an exhaustive listing of all the possibilities. Each individual project will also most likely require its own particular set of reports.

To better understand how to construct a report that matches your own individual requirements, it is recommended that you spend some time experimenting with the settings in the various reports. Generating reports does not affect your stored data in any way.

8.3 The Reports Page

The Reports page is divided into two sections: **Report Name** and **Generated Reports**.

Report Name shows a list of saved report setups (report templates). These are in turn used to generate the actual reports.

- Click **Run** to generate a new report instance. You will be prompted for a date range.
- Click **Edit** to change the settings for the report.
- Click **Delete** to delete the report setup.

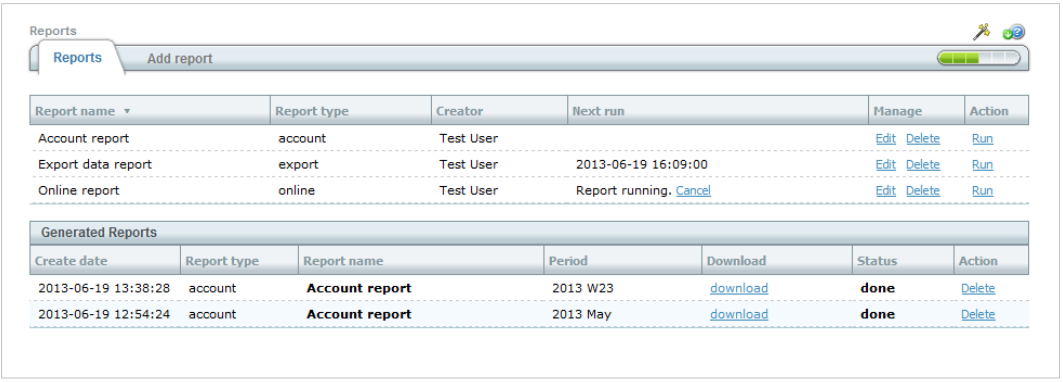


Fig. 87 Reports list

Generated Reports lists the generated report instances.

- Click **Download** to open the report or save it to your computer.
- Click **Delete** to delete the report.

> ! *Deleted reports are removed permanently from the account and cannot be undeleted.*

8.4 Creating a Report

Reports are created on the **Add report** page.

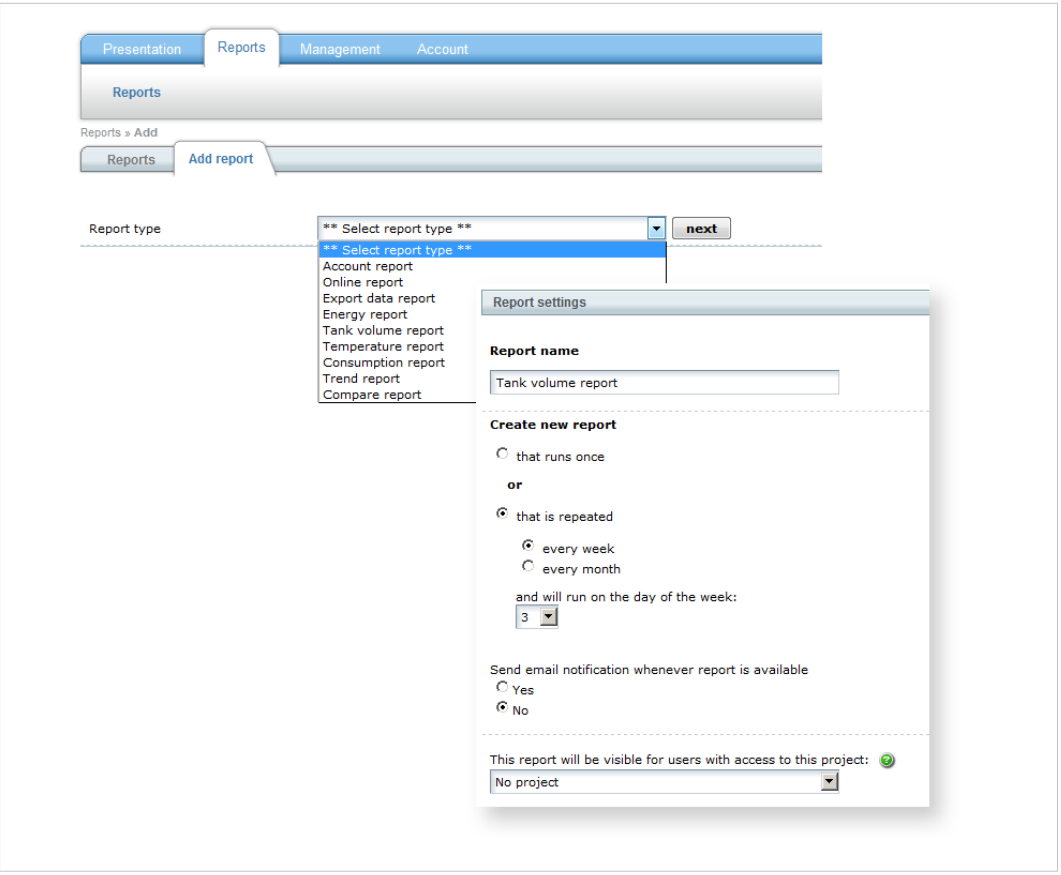


Fig. 88 Adding a new report

Reports can only be created by administrators and project managers, but can be accessed by all users that have been granted read data rights in the project.

1. Select the report type to generate and click on Next.
2. Enter the general report settings:

Report name	A descriptive name to allow easy identification.
Create new report	Select a one-time report or a repeated report (administrators only). Repeated reports can be run weekly or monthly. A maximum of 10 repeated reports can be created for each account.
Send e-mail notification...	Notify the account administrator each time a repeated report is generated.
This report will be visible...	Links the report to a specific project, making it accessible to users in that project. **No project** = only the account administrator will have access to the report.

3. The remaining (required or optional) settings are specific to the report type. See *Report-specific Settings, p. 73*.
4. Click on **Add** to create the report.

8.5 Report-specific Settings

The number of settings depend on the report type. In the case of the Online report, this is as simple as selecting whether or not to show detailed data. Other report types may have many more settings to configure.

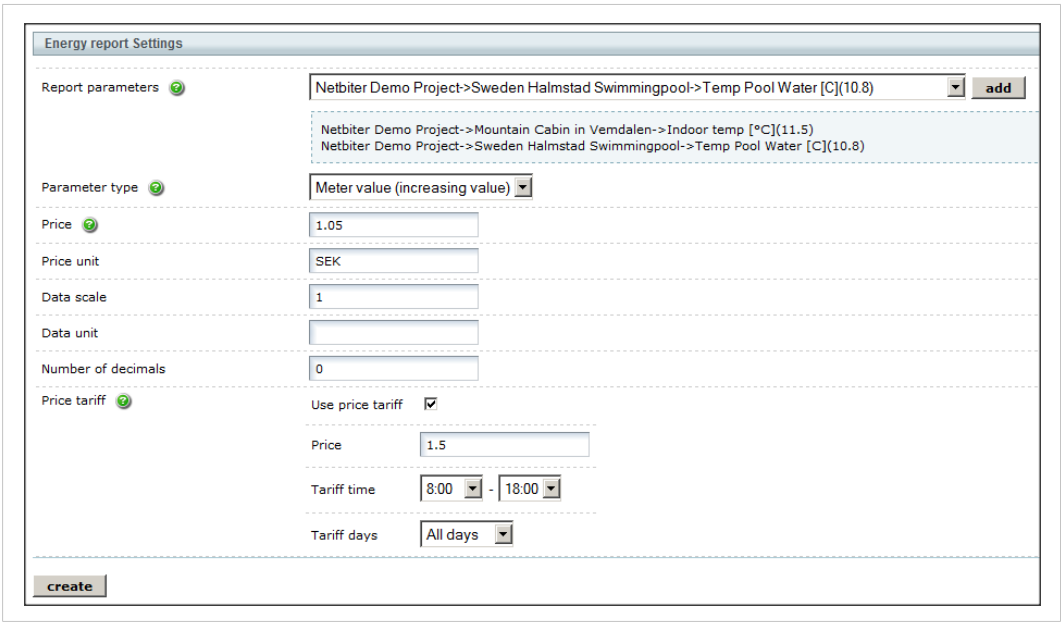


Fig. 89 Energy report

Some report types allow grouping of field system parameters. When adding a field system parameter to a group it will always be added to the most recently created group, i.e. the one at the bottom of the list. Parameters can be removed from a group, but it is not possible to add more parameters to existing groups.

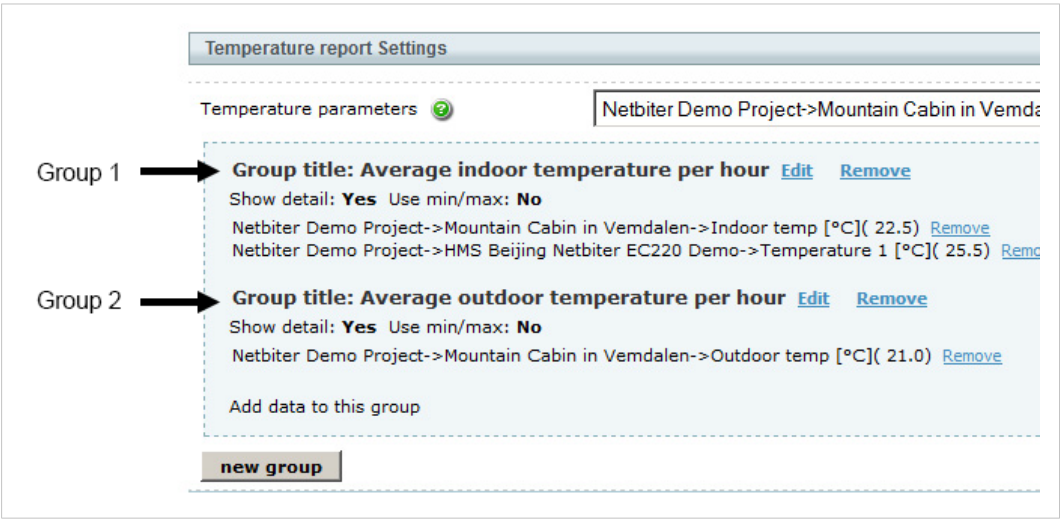

Temperature report Settings
Temperature parameters
Netbiter Demo Project->Mountain Cabin in Vemda
Group 1
Group title: Average indoor temperature per hour Edit Remove
Show detail: Yes Use min/max: No
Netbiter Demo Project->Mountain Cabin in Vemdalen->Indoor temp [°C](22.5) Remove
Netbiter Demo Project->HMS Beijing Netbiter EC220 Demo->Temperature 1 [°C](25.5) Remo
Group 2
Group title: Average outdoor temperature per hour Edit Remove
Show detail: Yes Use min/max: No
Netbiter Demo Project->Mountain Cabin in Vemdalen->Outdoor temp [°C](21.0) Remove
Add data to this group
new group

Fig. 90 Temperature report with two parameter groups

In the **Compare report** type, the selected field system parameters can be used to perform calculations and/or create graphs based on the data.

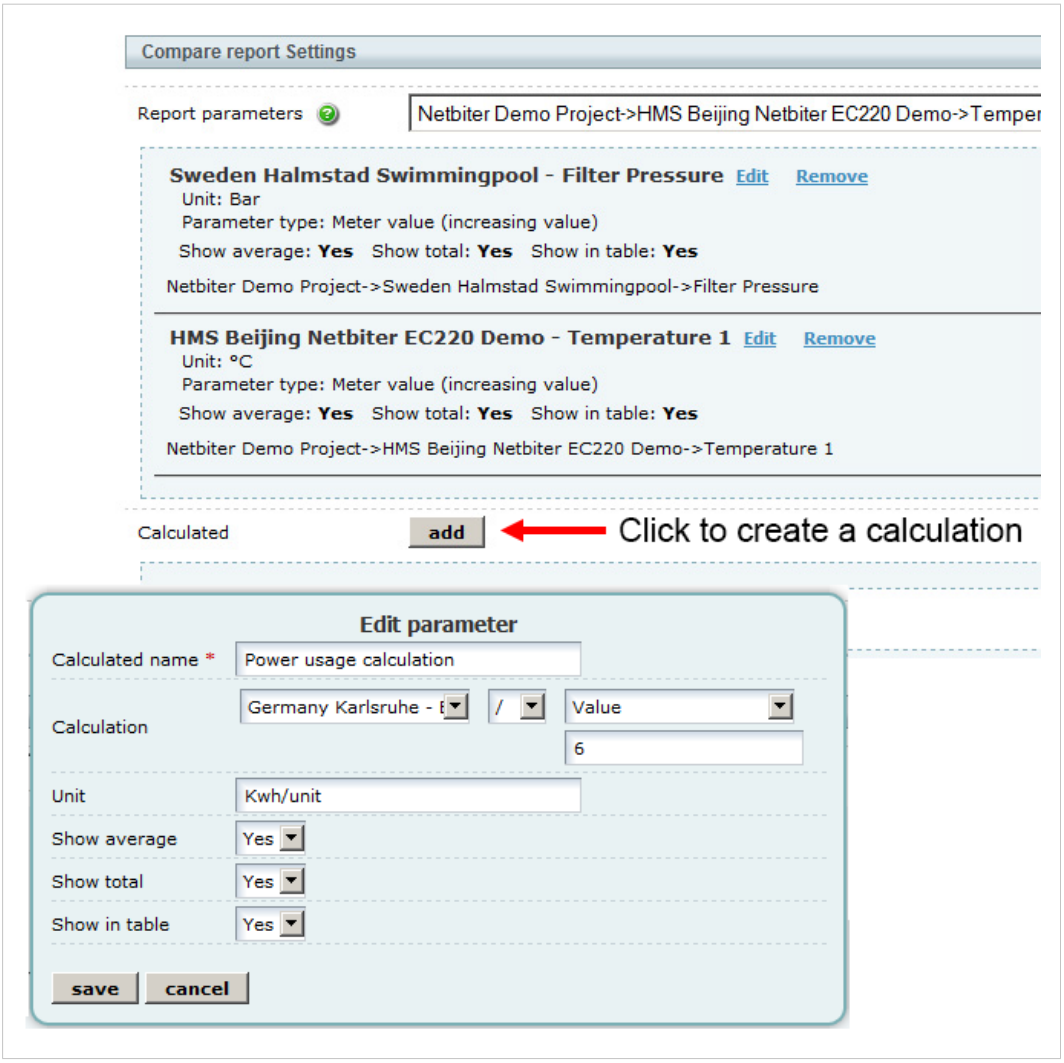


Fig. 91 Adding a calculation

Adding a calculation

1. In the Compare report settings, click **add**.
2. Enter a name for the calculation.
3. Select a parameter as the first operand.
4. Select the type of calculation to perform (add/subtract/multiply/divide/percentage).
5. Select a second parameter as the second operand, or set your own operand value.
6. Enter a unit to display in the calculation (optional).
7. Select whether to show average/total values and whether to present the data in table format.
8. Click **Save** to save the calculation.

A saved calculation can be used as an operand in other calculations.

9 Creating Templates and Profiles

Communication between a Netbiter EasyConnect gateway and the connected devices requires either a *device template* or a *device profile* to provide the mapping between the units.

Device template	Describes the parameters available in a connected device. It contains information about the available addresses and their data types, with predefined scaling and offsets. Various ways of displaying the parameters can also be determined in the template, e.g. enumerations and read/write conditions.
Device profile	Contains a device template plus additional configuration to provide a complete interface for the user, including dashboards, visualizations, alarms, etc.

If there is no suitable device template or profile for the device you are connecting, you will have to create one. Device templates can be created in all account types. Device profiles can only be created in *Manage and Analyze* accounts.

9.1 Creating a Device Template

1. On the **Templates** page (**Device templates** in M&A), click on **Add Template**.

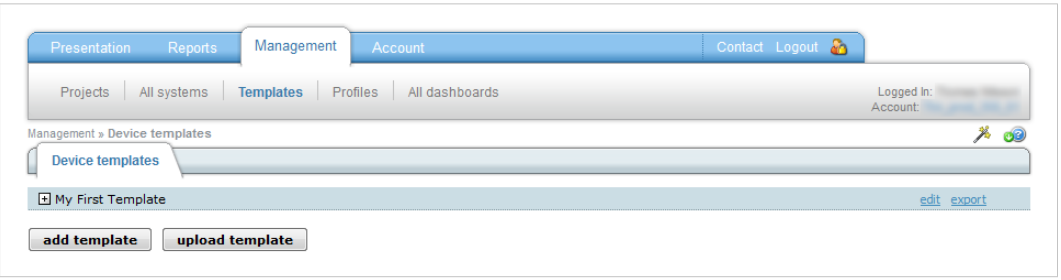


Fig. 92 Adding a new template

2. Choose a **Template type** and enter a descriptive name for the new template. The available template types depend on the Netbiter gateway model used.

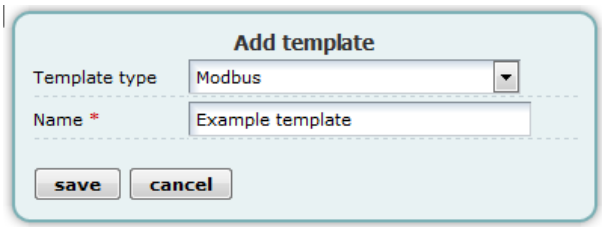


Fig. 93 Template details

3. Click **Save**. The new template is now added to the list of templates.

For EtherNet/IP templates, the LAN port in the gateway must be enabled.

EtherNet/IP tag is only compatible with specific PLC models. See the Netbiter EasyConnect Gateway User Manual.

9.1.1 Adding Parameters to a Template

1. Expand the list entry for the new template by clicking the **+** icon.

   The template currently only has one group – **Default group** – and no parameters.

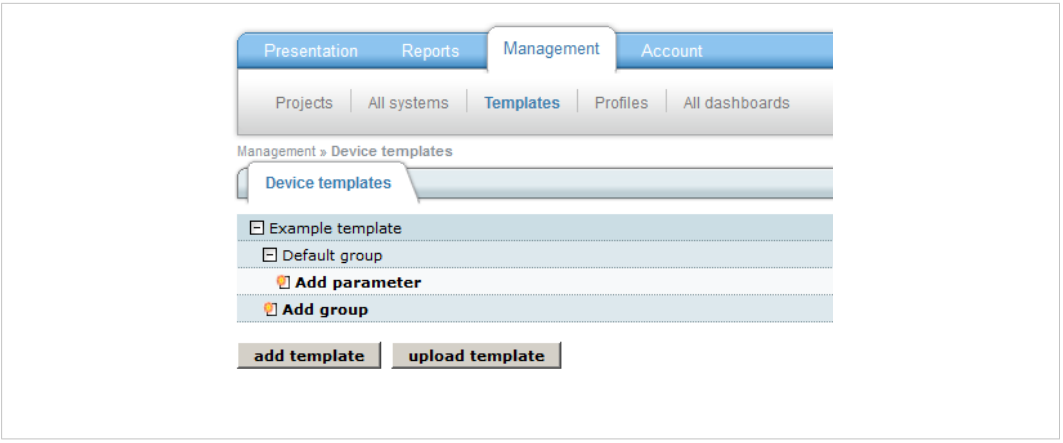


Fig. 94 Template list

2. Click on **Add parameter** and enter the required information in the dialog. Which fields are available depend on the parameter type.

   See *Parameter fields, p. 77*.

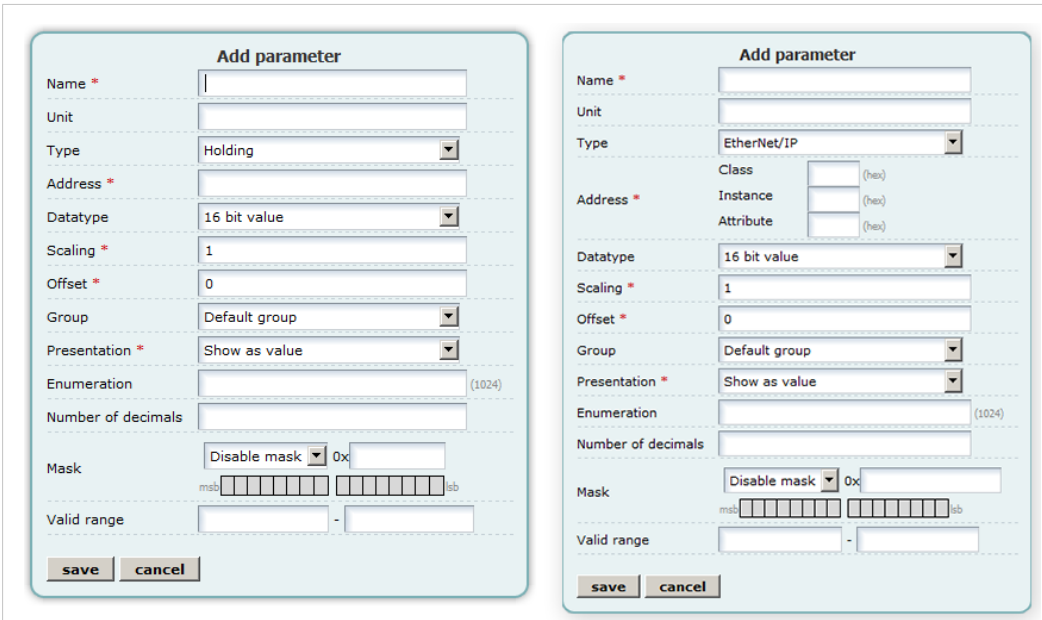


Fig. 95 Adding parameters to a template

3. Click **Save** to save the new parameter. Continue to add parameters as needed.

Parameter fields

Name A descriptive name for the parameter.

Unit Can be any type of unit such as V, KWh, hours, etc.

Type Depending on the template type, select Modbus type (Holding, Input, Coil, Discrete input), EtherNet/IP or EtherNet/IP tag, or SNMP.

Address The address to read from/write to.

For Modbus, the address is the Modbus register address.

For SNMP, the address is the SNMP Object Identifier (OID).

For EtherNet/IP, the address consists of three components, entered in hexadecimal format (without 0x prefix):

- **Class** A set of objects representing the same type of system component
- **Instance** Used for each copy of an object within the object class
- **Attribute** Each instance of the object class has the same set of attributes, but a unique set of values. An object instance/class has attributes, which provide services and implement behavior.

For EtherNet/IP tag, the address consists of two components:

- **Slot** CPU Module Slot Location, normally 0
- **Symbol tag** Tag name. Max 40 characters, can only contain alphabetic and/or numeric characters, and underscore (_). The name cannot start or end with an underscore.

Datatype Which data types are available for a parameter depend on the template type.

See *Data Types, p. 80*.

For more detailed descriptions of the data types, refer to the documentation for the device and protocol used.

Scaling and offsets Values read from or written to a Modbus or SNMP register can be modified before being presented/written. A common use for this is to convert values between units. Values will be divided by the **Scaling** factor when read, and multiplied when written. An **Offset** value can be used in conjunction with scaling.

On a read, the offset is added after scaling:

$$\text{Calculated value} = \frac{\text{Parameter value}}{\text{Scaling}} + \text{Offset}$$

On a write, the offset is subtracted before scaling:

$$\text{Parameter value} = (\text{Presented value} - \text{Offset}) \times \text{Scaling}$$

As examples that use both scaling and an offset, consider the conversion of temperatures between degrees Celsius or degrees Fahrenheit.

Celsius is calculated by scaling at 1.8 and an offset of -17.7778.

$$\text{Celsius} = \frac{\text{Farenheit}}{1{,}8} - 17.7778$$

For Fahrenheit, the scaling is set to 0.5556 and the offset is set to +32.

$$\text{Farenheit} = \frac{\text{Celsius}}{0{,}5556} + 32$$

Parameter fields (cont.)

Group	Select the parameter group to assign the parameter to.
Presentation	Defines how a value will be presented on a page. The following can be set:

Show as value	Reads the value from the address and presents it on the page.
Read/Write value	Reads the value from the address and presents it. There will be a **Set** button next to the value on the page, making it possible to write to the address.
Write only	This value can only be written to, and not read.
Show with enumeration	Reads the value and presents the corresponding enumerated string.
Read/Write value with enumeration	Reads the value and presents the corresponding enumerated string. Adds a drop-down menu with enumerated strings. The selected value will be written to the address.
Write only value with enumeration	Adds a drop-down menu with enumerated strings. The selected value will be written to the address.

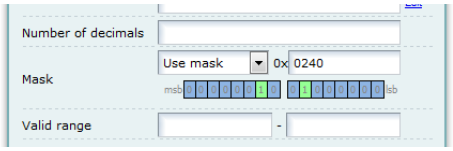
Enumeration	Enumeration variables are defined as [number]=[string]. Each enum is separated by a semicolon with no blank spaces.
	Examples:
	`0=Off;1=On`
	`0=Sun;1=Mon;2=Tue;3=Wed;4=Thu;5=Fri;6=Sat;7=Sun`
	`0=Weekend;6=Weekend;Default=Workday`
	It is also possible to use enumeration for all values not expressively defined, by entering
	`undefined={string}`

Number of decimals	Defines the number of decimals to use for the parameter.

Parameter fields (cont.)

Mask

Used to mask out specific bits from the Modbus or SNMP register. The value is presented in binary format. The register will be masked (logic AND) and shifted to the right before the value is presented on the page, logged or compared with for alarms.



To add or modify a mask, enter a hexadecimal value or click on the bits in the binary representation to toggle them.

Example:

Register value = 214 (D6 hex) and **Mask** = 240 (F0 hex) ⇒ 208 (D0 hex)

The value will be bit-shifted and shown as 13 (D hex).

The write function using a mask is a so-called “read-modify-write” operation, which means that the values are read from the register and then modified before the value is written to the register. As an example, Modbus Function Code 22 is not used.

Valid range

Defines the maximum and minimum for a write parameter. A warning message is displayed if a value outside this range is entered. If used in combination with scaling, it is the scaled value that should be used.

9.1.2 Data Types

Data type	Description	Template Type			
		Modbus	SNMP	EtherNet/IP	EtherNet/IP tag
8-bit value	-			x	
8-bit value with sign	-			x	x
16-bit value	-	x	x	x	
16-bit value with sign	-	x	x	x	x
32-bit value	Most significant word (register) on low address	x	x	x	x
32-bit value with sign	Most significant word (register) on low address	x	x	x	x
Swapped 32-bit value	Most significant word (register) on high address	x	x		
Swapped 32-bit value with sign		x	x		
64-bit value	-		x	x	
64-bit value with sign	-		x	x	
Floating point	32-bit floating point. (IEEE-754) Most sign. word (register) on low address	x	x	x	x
Swapped floating point	32-bit floating point. (IEEE-754) Most sign. word (register) on high address	x	x		
Double precision floating point	64-bit floating point. (IEEE-754) Most sign. word (register) on low address	x	x	x	
Swapped double precision floating point	64-bit floating point. (IEEE-754) Most sign. word (register) on high address	x	x		
Hi 8-bit value	Shows the high byte of a 16-bit register. When writing this value it will read the 16-bit register, update the high byte and write it back. When reading, the 16-bit register is read and the value of the high 8-bit is presented.	x	x		
Hi 8-bit value with sign		x	x		
Lo 8-bit value	Shows the low byte of a 16-bit register. When writing this value it will read the 16-bit register, update the low byte and write it back. When reading, the low 8-bit value is simply read and presented.	x	x		
Lo 8-bit value with sign		x	x		
Special format 1/2	Reserved for special implementations	x	x		
String	Entering this data type also displays the field for Multi register. The number entered here (1-20) determines how many 16-bit registers are read. As each character in the string uses 8 bits, each read register can contain 2 characters, giving a maximum string length of 40 (20x2) characters. 0x00 is used as a terminating character, e.g. for an odd number of characters. Invalid characters are either stripped or error returned, depending on the character. Character encoding is ISO-8859-1.	x	x	x	
ASCII Hex	Provided for backwards compatibility with older devices, this data type also uses the field for Multi register, where the value (1-20) determines how many 16-bit registers are read. Each 16-bit register is presented in hexadecimal form with 4 characters (0000… FFFF), so the max. length of the string is 80 (20 * 4) characters.	x	x		
Boolean	Boolean value.		x	x	x
Date time	Date and time as octet string.		x		
Bit string	Enumeration of named bits in an octet.		x		
Null	-		x		
SNMP Object ID	Uniquely defines a managed object. This is a string of numerals separated by periods. Example: 10.4.3.67.88.23		x		
IP address	IPv4 address as a string of 4 octets.		x		
Counter	32-bit number with minimum value 0 and maximum value 2^{32-1} (4,294,967,295).		x		
Gauge	32-bit number with minimum value 0 and maximum value 2^{32-1} (4,294,967,295). A gauge can increase or decrease at will, but can never exceed its maximum value.		x		
Timeticks	32-bit number with minimum value 0 and maximum value 2^{32-1} (4,294,967,295). Measures device uptime in 1/100 s.		x		
Opaque	Allows any encoding to be put into an octet string.		x		
64-bit counter	Like **Counter** but with max. value 2^{64-1} (18,446,744,073,709,551,615)		x		

9.1.3 Uploading the New Template

When the template is complete, click **Upload template** to upload it to Netbiter Argos.

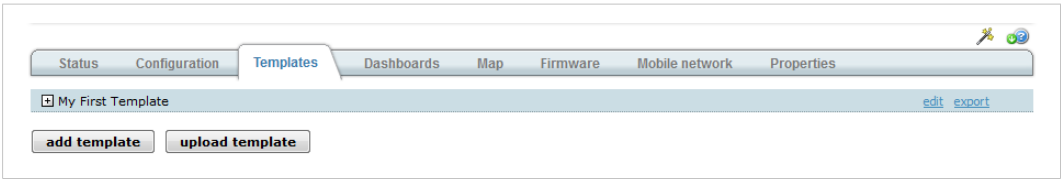


Fig. 96 Adding the new template

9.2 Creating a Device Profile (M&A)

1. Click on the **Add profile** tab.

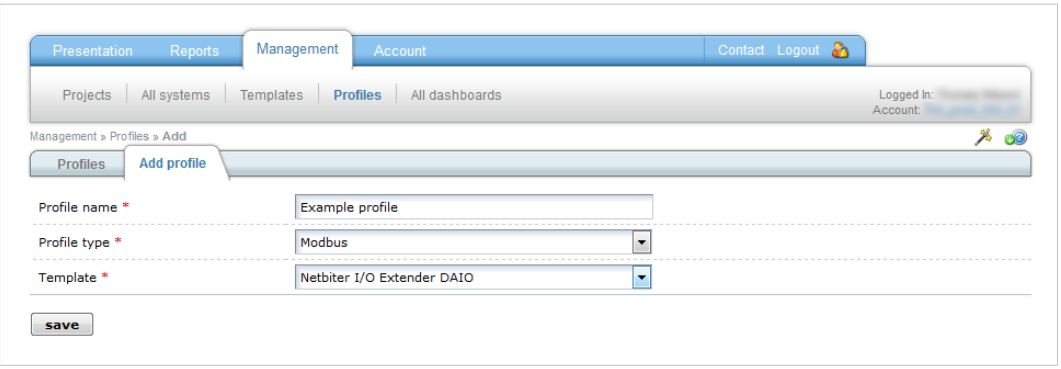


Fig. 97 Adding a profile

2. Enter a descriptive **Profile name**.
3. Select a **Profile type**: Modbus, SNMP, EtherNet/IP, or Virtual.

   Virtual profiles are used for internal I/O and registers.
4. Select the **Template** that contains the parameter mappings required for the device.

   If there is no suitable device template, you may have to create one.
5. Click on **Save** to save the profile.

Fig. 98 User defined profile

The new profile will be added to the *User defined device profiles*.

You can now edit the profile and add parameters for logging, visualization and alarms, and configure default gateway settings. You can also connect additional device templates to the profile by clicking the **Add** button on the **Connected templates** row.

9.3 Editing a Device Profile (M&A)

Device profiles can be either *system defined* or *user defined*. System profiles cannot be edited, although you can create a copy of a system profile as a user defined profile.

When adding parameters to a device profile, the values from the connected template are used as default. Some values cannot be overridden in the profile.

If a profile requires a parameter that does not exist in the template, you need to either edit the template or connect additional templates.

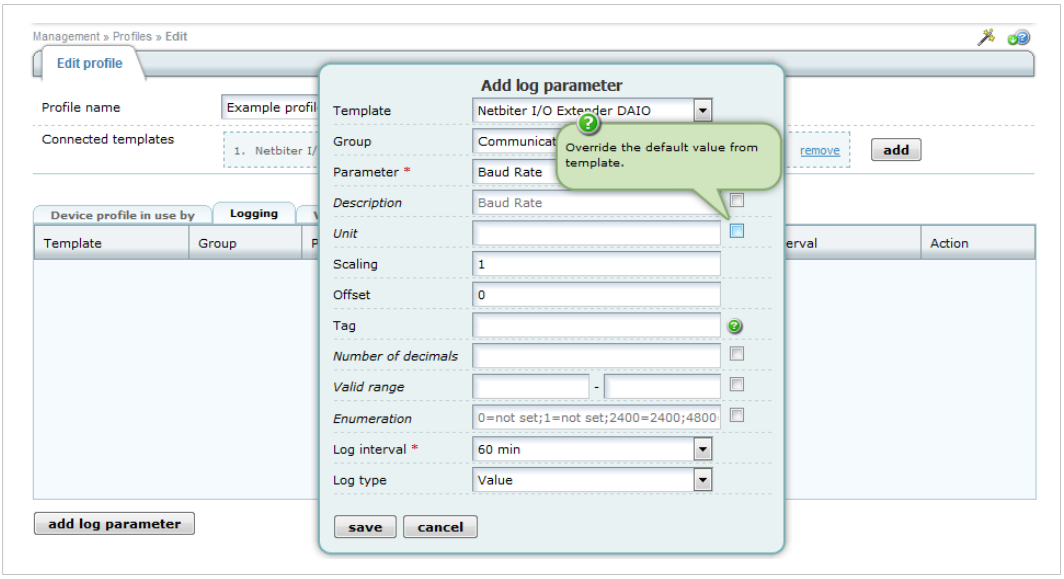


Fig. 99 Editing a profile

Dashboards

Dashboards are configured separately and then linked to the profile.

See *Dashboards, p. 48*.

Gateway Settings

Adding default gateway settings to the device profile will facilitate easy setup of a new device. The profile gateway settings can be overridden in the device settings.

See *Configuration –Gateway Settings, p. 40*.

10 Account Settings (V&C)

The account settings for a *View and Control* account are accessed by clicking on the Account name.

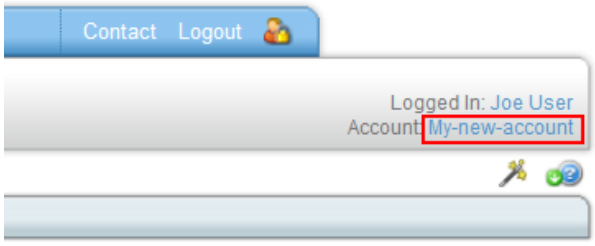


Fig. 100 Account settings link

10.1 Billing

This feature is currently not supported.

10.2 Subscription

This tab allows you to upgrade your account by adding subscriptions.

See *Upgrading to Manage and Analyze, p. 12*.

10.3 Log Calculation

The **Log Calculation** tool will help you calculate how long time the log data will be saved for depending on the number of log parameters and log configuration.

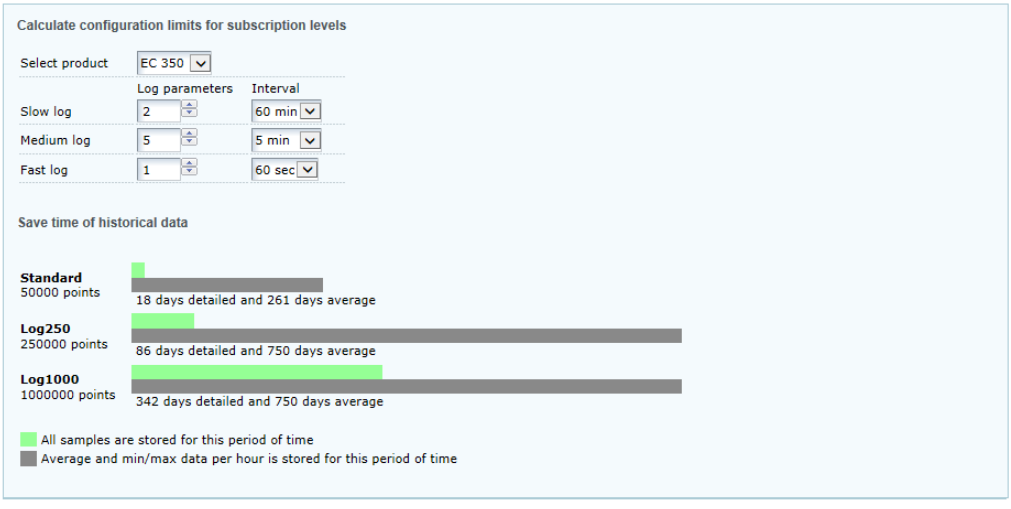


Fig. 101 Log calculation tool

10.4 Configuration

10.4.1 Alarm forwarding behavior

Netbiter Argos can generate an alarm if a field system goes offline, or if the GPS receiver (where supported) is moved more than a certain distance or loses its signal.

The alarm forwarding behavior can be set on the account, project and field system levels. Projects and systems can be configured to inherit the settings from the account.

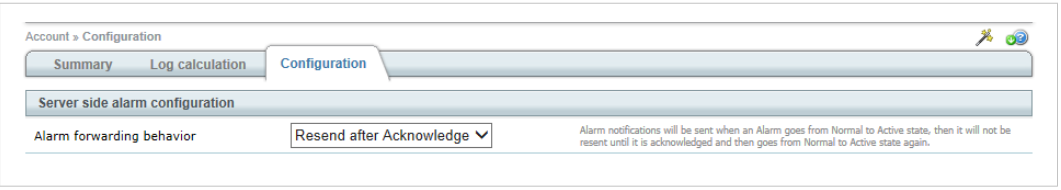

Account » Configuration
Summary
Log calculation
Configuration
Server side alarm configuration
Alarm forwarding behavior
Resend after Acknowledge
Alarm notifications will be sent when an Alarm goes from Normal to Active state, then it will not be resent until it is acknowledged and then goes from Normal to Active state again.

Fig. 102 Server side alarm configuration

Resend After Acknowledge	After the alarm has been acknowledged, a new notification will only be sent if the state changes from normal to active.
Resend on State Change	Alarm notifications will be resent upon state change, even if they are acknowledged. A maximum of 3–4 alarm notifications will be sent per hour and configured alarm.

11 Account Settings (M&A)

The user accounts in a *Manage and Analyze* account are managed from the **Account** tab. The Account tab is only available for the Administrator.

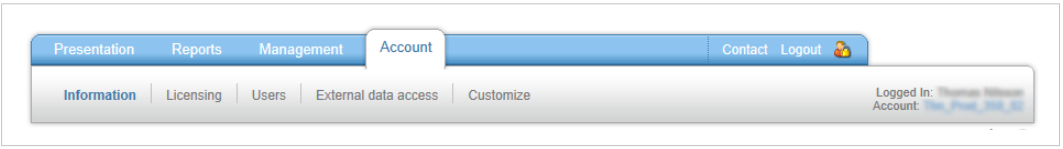


Fig. 103 Account tab

11.1 Information – Summary

This page provides a summary of account statistics and login information.

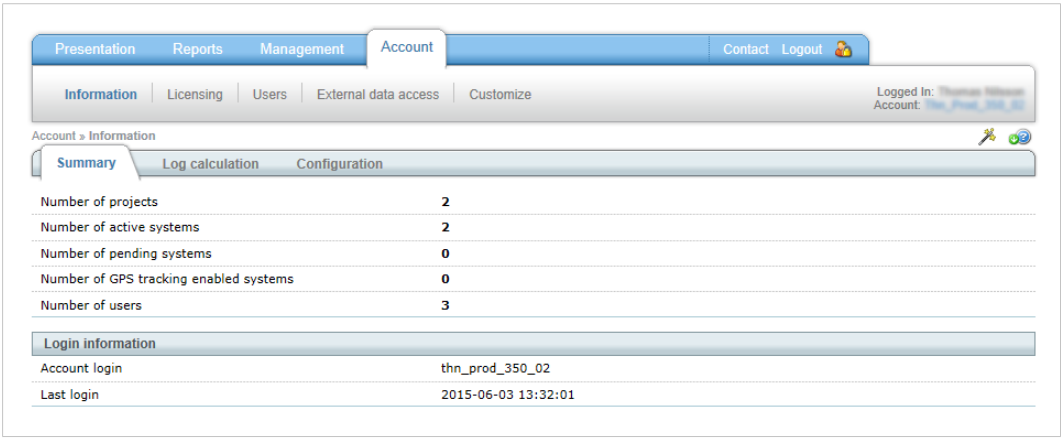


Fig. 104 Account summary

11.2 Information – Log Calculation

11.2.1 Log Calculation

The **Log Calculation** tool will help you calculate how long time the log data will be saved for depending on the number of log parameters and log configuration.

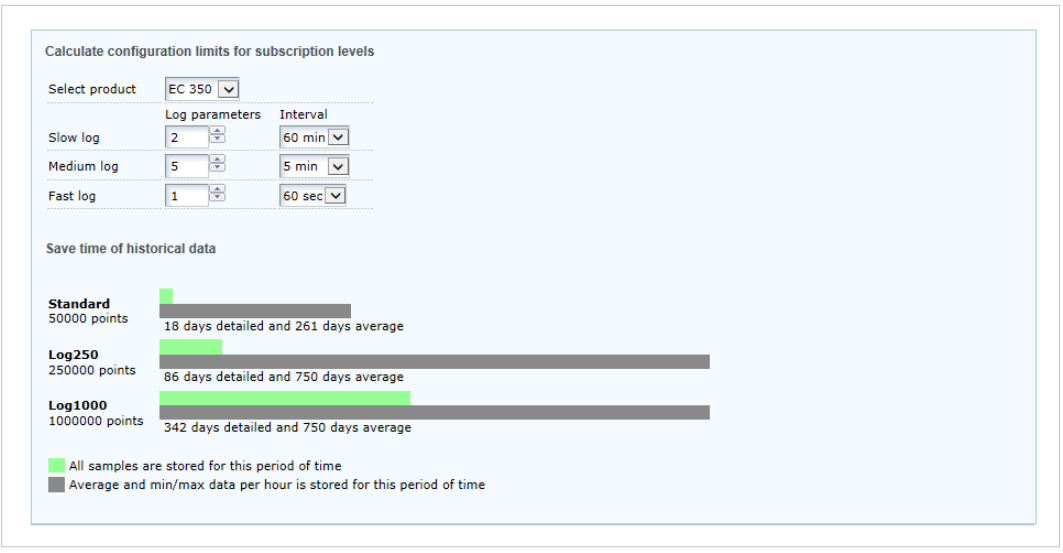


Fig. 105 Log calculation tool

11.3 Information – Configuration

11.3.1 Alarm forwarding behavior

Netbiter Argos can generate an alarm if a field system goes offline, or if the GPS receiver (where supported) is moved more than a certain distance or loses its signal.

The alarm forwarding behavior can be set on the account, project and field system levels. Projects and systems can be configured to inherit the settings from the account.

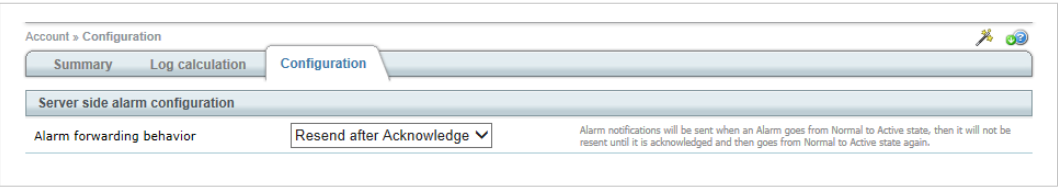

Account » Configuration
Summary
Log calculation
Configuration
Server side alarm configuration
Alarm forwarding behavior
Resend after Acknowledge
Alarm notifications will be sent when an Alarm goes from Normal to Active state, then it will not be resent until it is acknowledged and then goes from Normal to Active state again.

Fig. 106 Server side alarm configuration

Resend After Acknowledge	After the alarm has been acknowledged, a new notification will only be sent if the state changes from normal to active.
Resend on State Change	Alarm notifications will be resent upon state change, even if they are acknowledged. A maximum of 3–4 alarm notifications will be sent per hour and configured alarm.

11.4 Licensing – Billing

This feature is currently not supported.

11.5 Licensing – Subscription

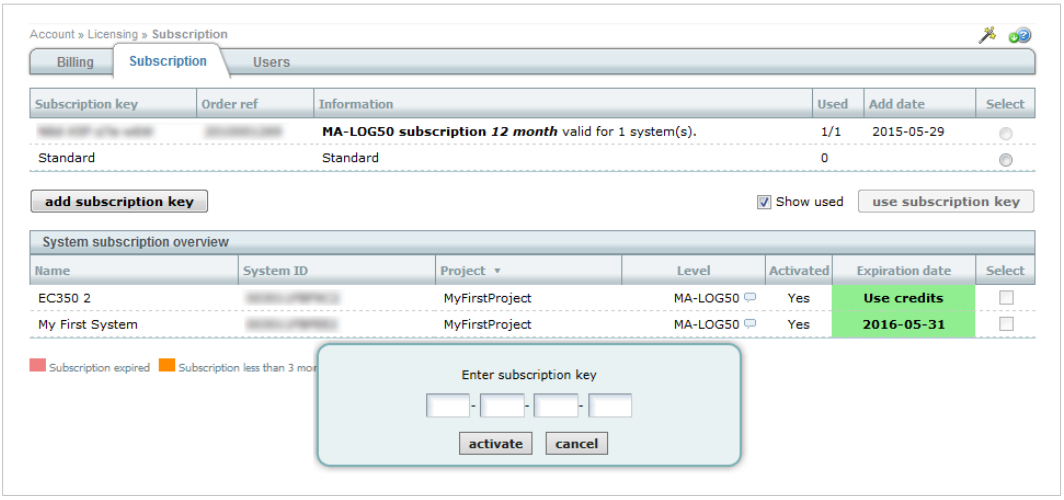


Fig. 107 Subscription page

Netbiter Argos uses a subscription system to define the number of allowed field systems and users and the amount of log data storage. Contact your Netbiter sales channel to purchase additional subscriptions to extend your account.

To add a subscription key, click on **Add subscription key** and follow the online instructions.

To display all currently used subscription keys, tick the **Show used** box.

11.6 Licensing – Users

This tab shows information about the active subscriptions for user accounts.

The standard *Manage and Analyze* subscription allows 9 users in addition to the account administrator. To add a new subscription key for additional users, click on **Add subscription key** and follow the online instructions.

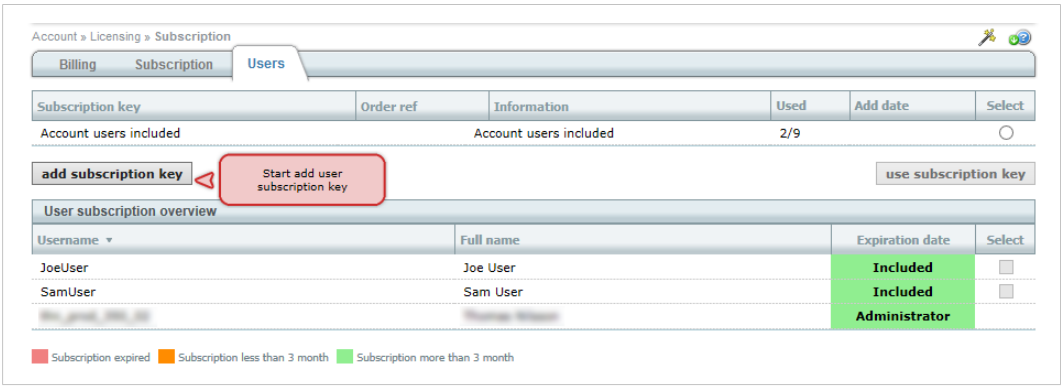


Fig. 108 Users page

11.7 Users – All Users

This tab shows basic user information and login status. Clicking on a user name will show details for the user.

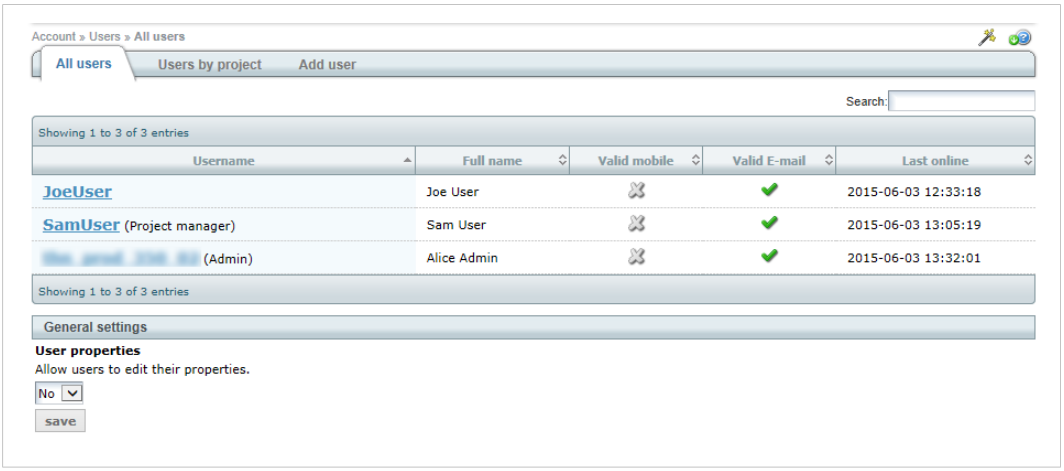


Fig. 109 All users page

11.8 Users – Users by Project

This tab lists the users in each project along with their access rights.

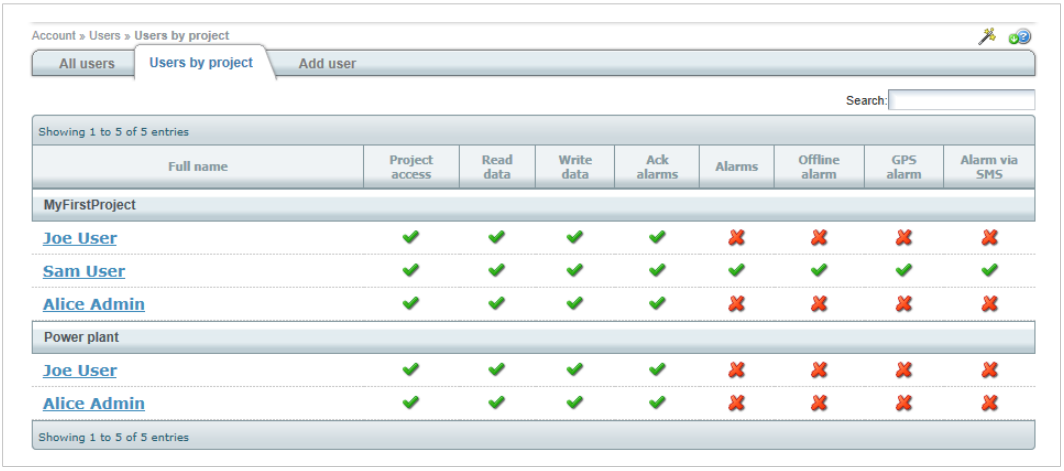


Fig. 110 Users by project

11.9 Users – Add User

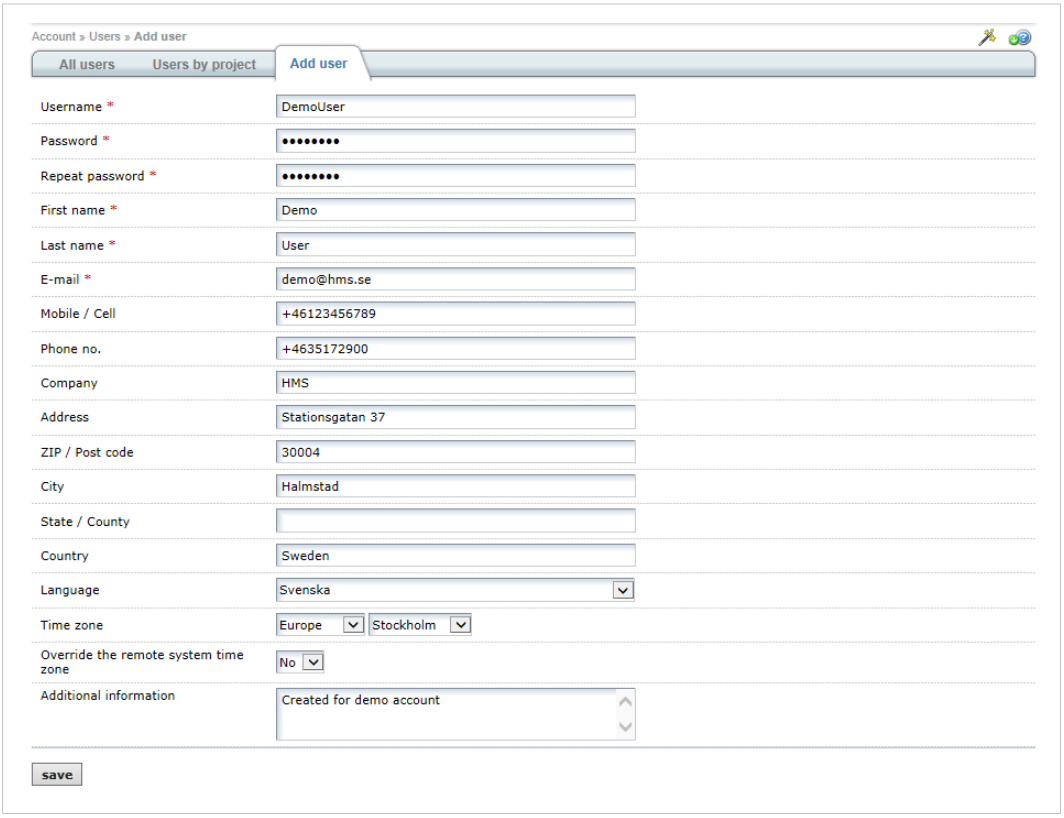


Fig. 111 Add user page

Most fields are self-explanatory. Required fields are marked with an asterisk *.

- The **Username** cannot contain spaces or special characters.
- The **Password** should consist of at least 8 characters, and should include both upper and lower case letters, numbers, and special characters.
- The **E-mail** field entry will be used for e-mail alarm messages.
- The **Mobile / Cell** field entry will be used for SMS alarm messages. The number must be entered in international format with a plus sign before the country code.

  Example (if the country code is 46): +46123456789
- The **Language** field is only meant for storing information about the language spoken by the user. It will not change the language of the Netbiter Argos interface.
- If **Override the remote system time zone** is set to **Yes**, the Time zone entry for the user account will be used in the alarm timestamps. Otherwise, the time zone set in the field system configuration will be used.

11.10 Users – User Overview

See also *Users – Edit User, p. 92*.

11.10.1 User Information

This tab shows the basic information for the user.

See *Users – Add User, p. 89* for details about the various fields.

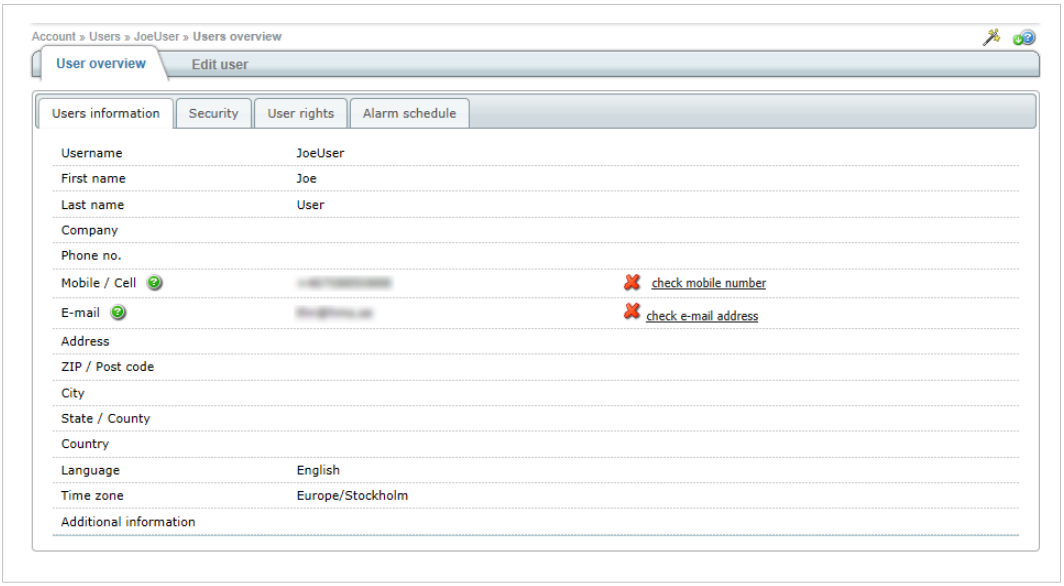


Fig. 112 User information

Check mobile number

Clicking this link will send a test SMS text to the phone number in the Mobile/Cell field.

Check e-mail address

Clicking this link will send a test e-mail to the address in the E-mail field.

11.10.2 Security

If two-step verification is enabled, the user will be required to enter an extra one-time code when logging in. The one-time code is sent as a text message to the user.

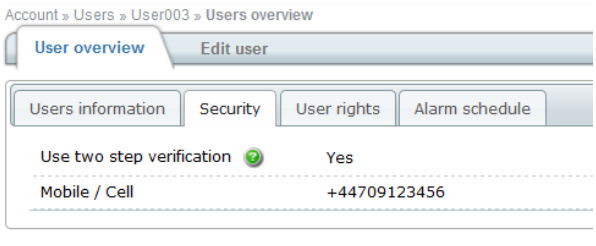


Fig. 113 Enabling two-step verification

11.10.3 User Rights

Shows which projects the user has access to as well as the specific rights for each project.

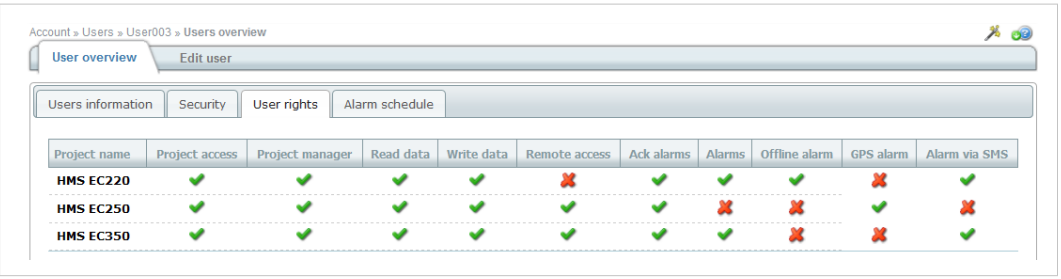


Fig. 114 User rights overview

11.10.4 Alarm Schedule

Shows at what times the user is configured to receive alarms from projects.

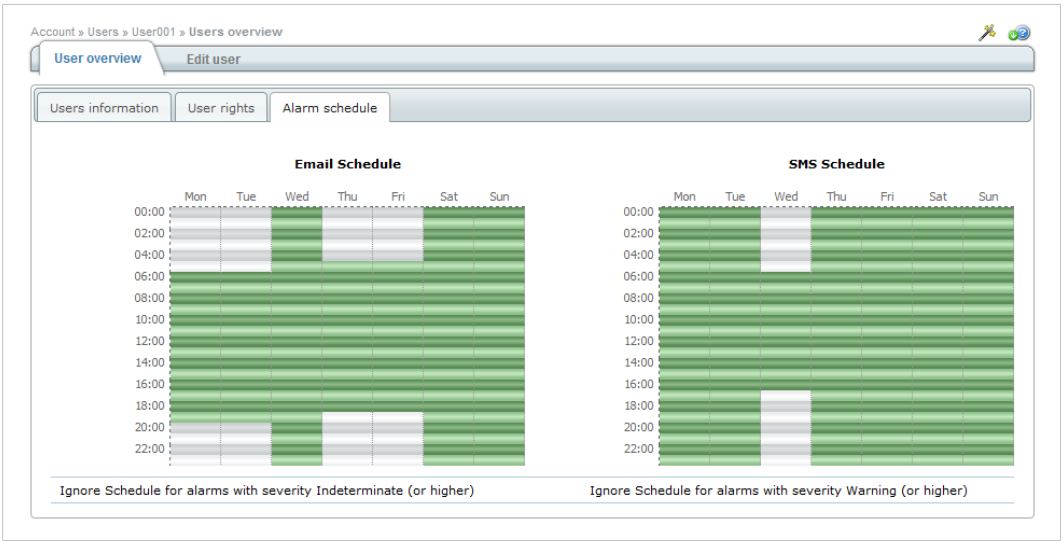


Fig. 115 Alarm schedule

11.11 Users – Edit User

The **Edit user** tab allows editing of the information shown under **User overview**.

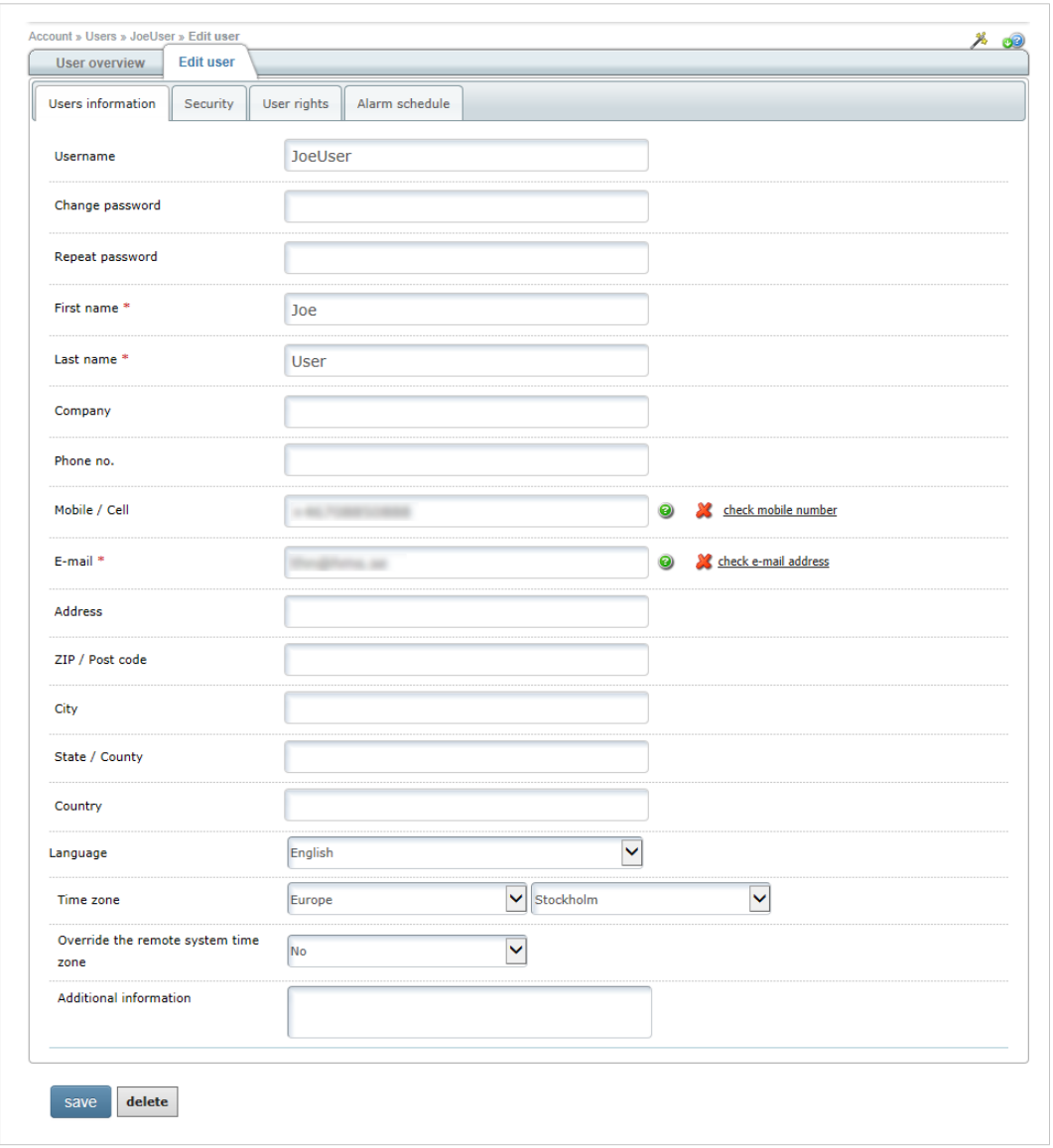


Fig. 116 Edit user

All fields except **Username** can be edited.

See *Users – Add User, p. 89* for details about the various fields.

Check mobile number

Clicking this link will send a test SMS text to the phone number in the Mobile/Cell field.

Check e-mail address

Clicking this link will send a test e-mail to the address in the E-mail field.

11.11.1 Security

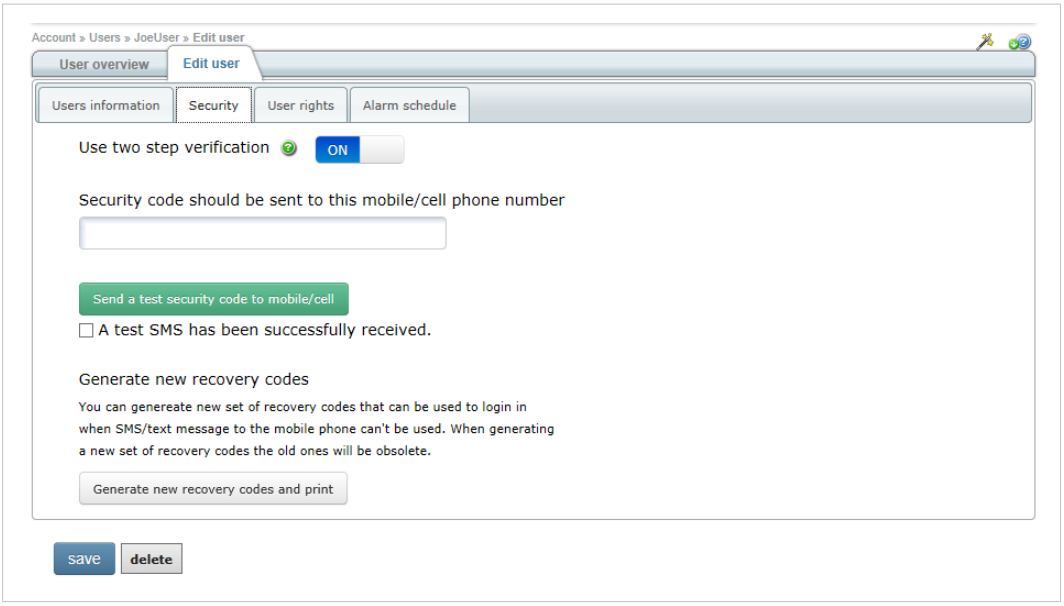

Account » Users » JoeUser » Edit user
User overview
Edit user
Users information
Security
User rights
Alarm schedule
Use two step verification
ON
Security code should be sent to this mobile/cell phone number
Send a test security code to mobile/cell
A test SMS has been successfully received.
Generate new recovery codes
You can genereate new set of recovery codes that can be used to login in when SMS/text message to the mobile phone can't be used. When generating a new set of recovery codes the old ones will be obsolete.
Generate new recovery codes and print
save
delete

Fig. 117 Security tab

Use two step verification

If two-step verification is enabled, the user will be required to enter an extra one-time code when logging in. The one-time code is sent as a text message to the user.

Send a test security code to mobile/cell

Click this button to send a test SMS text message to the supplied phone number.

A test SMS has been successfully received

Tick the check-box to confirm that the text message was received.

Generate new recovery codes

If a mobile phone is not available, the security code can be taken from a list of recovery codes. Click this button to generate a new list of recovery codes.

Generating a new list of recovery codes will render any previous codes obsolete.

Recovery codes should be printed and stored safely for future use.

11.11.2 User Rights

This tab is used to set specific access rights for the user in each project.

Checking the **Project access** box will grant a basic set of access rights which can then be edited as required. Click **Save** to save the changes.

> ! *Clicking Delete will delete the user and all the related user information.*

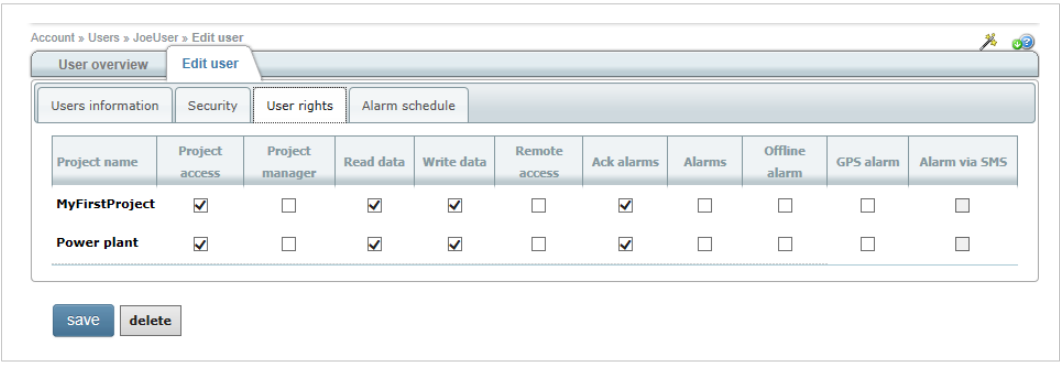


Fig. 118 User rights

Project access	Allows basic access to the project.
Project manager	A project manager has elevated rights in a project, and is allowed to: • create one-time-reports • create or change configurations and synchronize systems within the project • add/delete/activate/deactivate systems within the project • move devices between permitted projects
Read data	The user has read-only access.
Write data	The user has write access.
Remote Access	The user can use Remote Access mode. This is enabled automatically for an administrator when creating an account using a Netbiter EasyConnect gateway with this functionality.
Ack alarms	The user is allowed to acknowledge alarms.
Alarms	The user is allowed to receive alarm notifications by e-mail.
Offline alarm	The user is allowed to receive an alarm if a field system in the project goes offline.
GPS alarm	The user is allowed to receive GPS position alarms from field systems in the project.
Alarm via SMS	The user is allowed to receive alarm notifications in SMS messages.

11.11.3 Alarm Schedule

These settings only control **when** a user can receive alarms. Each individual alarm must also be configured in the project and field system. When configured, the user will automatically be sent alarm e-mails and/or SMS messages according to the schedule.

A green cell means that the user can receive messages during that time slot, grey means the opposite. Clicking on a cell will toggle it on/off. Clicking and dragging will “paint” a number of cells.

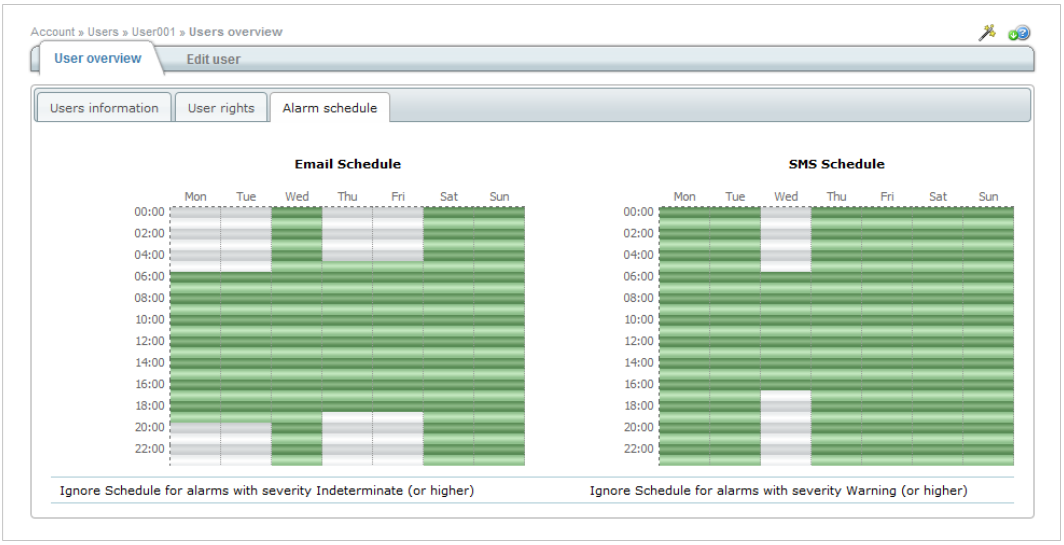

Account » Users » User001 » Users overview
User overview
Edit user
Users information
User rights
Alarm schedule
Email Schedule
SMS Schedule
Mon Tue Wed Thu Fri Sat Sun
00:00 02:00 04:00 06:00 08:00 10:00 12:00 14:00 16:00 18:00 20:00 22:00
Ignore Schedule for alarms with severity Indeterminate (or higher)
Ignore Schedule for alarms with severity Warning (or higher)

Fig. 119 Alarm schedule

Ignore Schedule

The system can be set to ignore the schedule completely for alarms at a certain severity level or higher.

Example: If the Ignore Schedule severity is set to **Major**, the user will receive Major and Critical alarms at all times, and all other alarms only during the scheduled times.

11.12 External Data Access

Data from field systems can be distributed to other parties or applications in three ways:

- **Web services** - Involves creating a distributable access key to the required data
- **RSS feeds** - Involves creating a URL for use in an RSS reader
- **Published Profiles** - Sharing custom profiles with other Netbiter Argos accounts

11.12.1 Create a Web Services Access Key

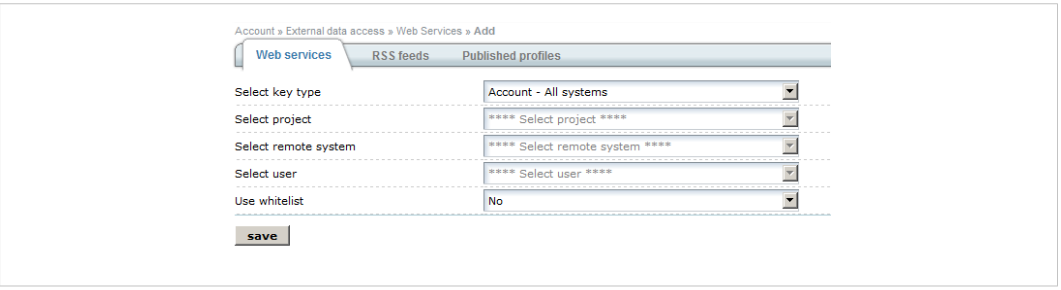


Fig. 120 Web services

The web services API for Netbiter Argos makes it possible to display information from field systems in other web sites or applications. Examples are application-specific user interfaces and presentation of data to system end users. See the Argos API documentation at apidocs.netbiter.net for more information.

Web services simplify the task of reading data from the field system and mask the complexity of the underlying addressing and low-level protocols used in the process.

1. Click on **Add**.
2. For the **Key Type**, select the required level of access, selecting from:

   Account - access to the entire account

   Project - access to a single project (repeat for multiple projects)

   Field System - access to a single field system (repeat for multiple systems)

   User - access for a particular user (repeat for multiple users)
3. Select the relevant project, system or user.
4. Set **Use Whitelist** to **Yes** if you want to allow access only to approved IP addresses. See *Use an IP Whitelist, p. 99*.
5. Click on **Save**.

After saving, an access key will be displayed in the list. This key can be copied and distributed to the external party requiring access.

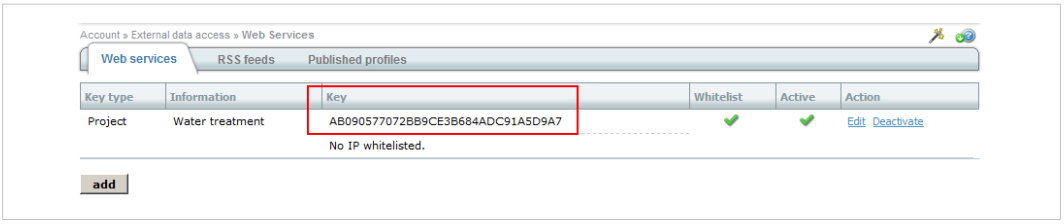


Fig. 121 Access key

11.12.2 Create an RSS Feed

An RSS feed can be used to distribute alarm history to an RSS reader. When an RSS feed is added, there will be a a RSS feed icon at the end of the row, which will also be available on the main presentation page.

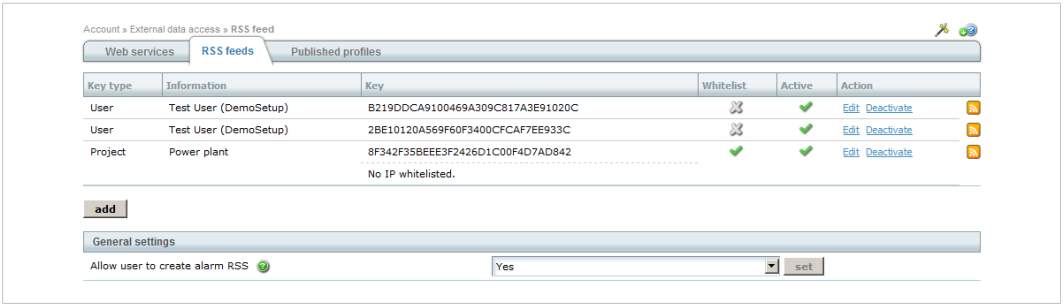


Fig. 122 RSS feeds

1. Click on **Add** .

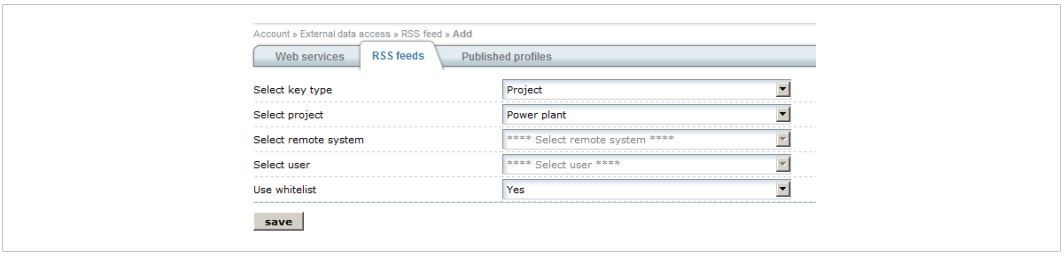


Fig. 123 Adding a feed

2. For the **Key Type**, select the required level of access, selecting from:

   Account - All projects and systems in the account will be included in the feed

   Project - RSS feed from a single project (repeat for more projects)

   Field System - RSS feed from a single field system (repeat for more systems)

   User - Only include content that a particular user can access (repeat for more users)

3. Select the relevant project, system or user.
4. Set **Use Whitelist** to **Yes** if you want to allow access only to approved IP addresses. See *Use an IP Whitelist, p. 99*.
5. Click on **Save**.

General settings

This setting makes it possible for users to add RSS feeds independently of the administrator, and an RSS icon is added to the presentation page. When clicked, the icon will create an RSS feed user key in the feed list. There will no whitelist activated for this kind of automatically generated user key.

Allow user to create alarm RSS - **Yes** will add the RSS icon to the presentation page.

Reading the RSS feed

Reading an RSS feed requires an RSS reader - most modern web browsers can do this. Click the RSS symbol to open it in a new window, then add the URL to the RSS reader.

11.12.3 Published Profiles

Fig. 124 Published profiles tab

This feature allows custom profiles to be made available to other Netbiter Argos accounts. If you are the administrator for several accounts, then this is also how you can re-use your profiles in your other account(s).

This process creates an independent copy of the profile. Changes made to the original will not be reflected in a published profile.

Publishing a Profile

1. Click on **Add**.
2. Select the profile to publish.
3. Click on **OK**. The profile will now be published along with its unique key.
4. Click the blue arrow button and follow the instructions on distributing the link.

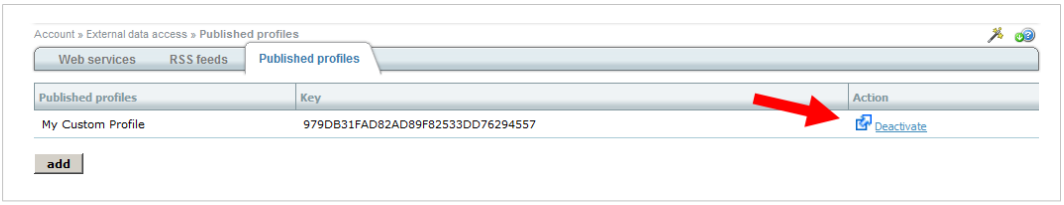


Fig. 125 Distributing the profile

5. Now access the (other) account that will use the profile. After logging in, there will be a message that there is a profile waiting to be confirmed.

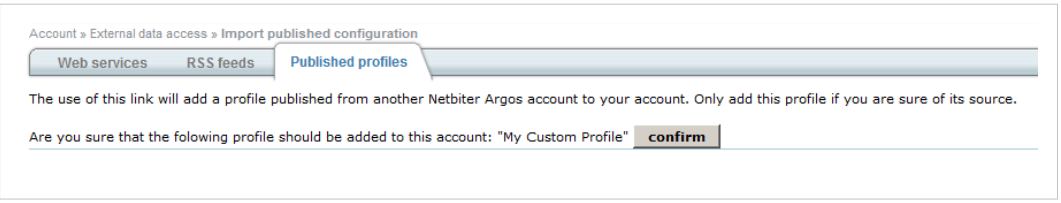

Account » External data access » Import published configuration
Web services
RSS feeds
Published profiles
The use of this link will add a profile published from another Netbiter Argos account to your account. Only add this profile if you are sure of its source.
Are you sure that the folowing profile should be added to this account: "My Custom Profile"
confirm

Fig. 126 Importing the profile

6. Click **Confirm** to import the profile into the account.

11.12.4 Use an IP Whitelist

A whitelist of approved IP addresses allows access by these IP addresses only. When using a whitelist, each IP address that attempts to access a web service access key or an RSS feed will need to be approved or blocked.

To do this, first access the access key or RSS-feed URL from the computer/device that should be granted access. Now click the **Edit** link for the web service access key or RSS feed - the IP address for the client is displayed. As a basic security precaution - check that the latest time of use is correct/reasonable and then click **Approve** at the end of the row.

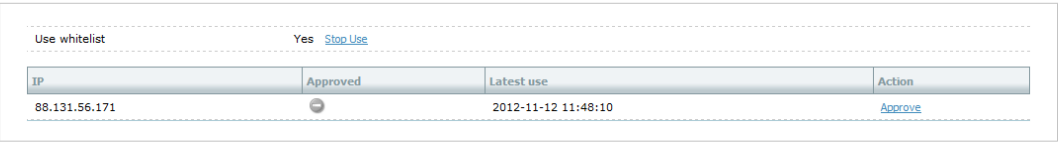


Fig. 127 Example whitelist

11.13 Customize

Some features of the Netbiter Argos interface can be changed to provide a more personal touch to your account

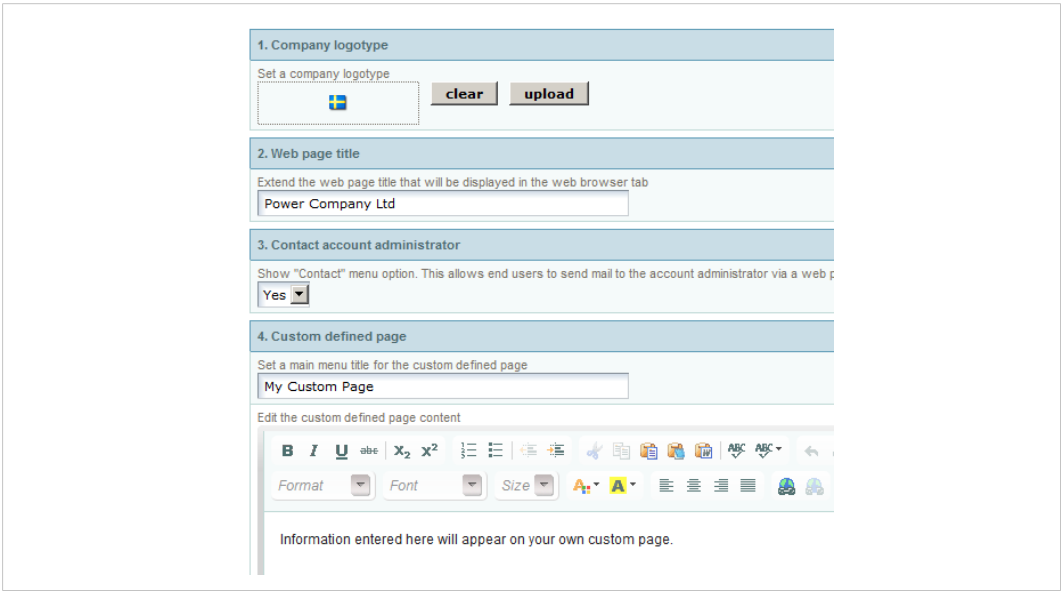

1. Company logotype
Set a company logotype
clear
upload
2. Web page title
Extend the web page title that will be displayed in the web browser tab
Power Company Ltd
3. Contact account administrator
Show "Contact" menu option. This allows end users to send mail to the account administrator via a web
Yes
4. Custom defined page
Set a main menu title for the custom defined page
My Custom Page
Edit the custom defined page content
Format
Font
Size
Information entered here will appear on your own custom page.

Fig. 128 Customizing features

Company logotype	A logotype can be placed at the upper right corner of the user interface. The image can be in JPEG or PNG format, and can be up to 140 x 36 pixels.
Web page title	The string displayed in the title bar and tab of the web browser.
Contact account administrator	Adds a **Contact** item to the top-level menu, which opens a web form for users to send a message to the administrator for this Netbiter Argos account.
Custom defined page	Adds an extra menu item to the top-level menu, which shows an optional custom page that can be edited in the editor below the field for the page title. The custom page can be userd for information about your company, the Netbiter Argos account, or any other information.

12 Replacing a System (M&A)

The **Replace** function makes it possible to replace a communication gateway in a field system without losing the configuration and accumulated data.

12.1 Replacing a System

1. Connect the new gateway via Ethernet or mobile network and power it up.

   See the installation documentation for the gateway for instructions.

2. Add the new gateway to the Netbiter Argos account.

   See *Adding More Field Systems (M&A), p. 14*.

3. On the **Management** tab, select **All Systems** and click on the **Replace** link for the system that is to be replaced.

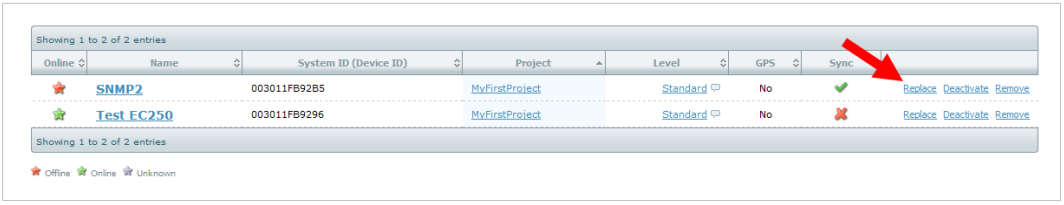


Fig. 129 Replace system link

4. Enter the activation codes for both gateways and click on **Replace**.

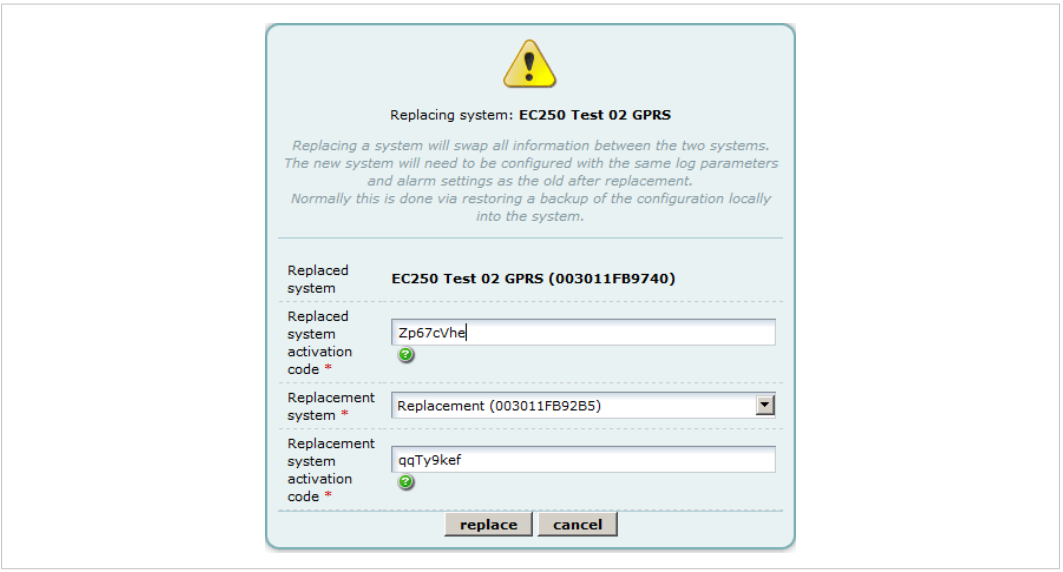

Replacing system: EC250 Test 02 GPRS
Replacing a system will swap all information between the two systems. The new system will need to be configured with the same log parameters and alarm settings as the old after replacement. Normally this is done via restoring a backup of the configuration locally into the system.
Replaced system
EC250 Test 02 GPRS (003011FB9740)
Replaced system activation code *
Zp67cVhe
Replacement system *
Replacement (003011FB92B5)
Replacement system activation code *
qqTy9kef
replace
cancel

Fig. 130 Replacing system

5. If using a mobile network, go to the **Mobile network** tab for the new system and configure the SIM card settings. See *Connecting to the Netbiter Gateway, p. 15*.

6. The new gateway will now swap names with the old one, which will be moved to the **Inactive** tab.

7. Finally, synchronize the configuration.

The removed unit may still be shown as online and the new unit as offline until Netbiter Argos has finished updating. Please note that this may take several minutes.

13 Netbiter WS Gateways

The Netbiter WS100 and WS200 gateways are configured and managed exclusively via an internal web server, and are usually accessed via a local Ethernet network. However, they can also be configured to connect to Netbiter Argos, with the following limitations:

- Only alarms and log data can be presented
- No commands can be sent to the gateway
- Dashboards are not available

The Netbiter WS takes care of all communication with the NetBiter Argos server. No public or static IP addresses are required.

Monitoring of alarm and log points is configured through the local web pages in the Netbiter WS gateway. The data is then automatically sent to the Netbiter Argos server.

13.1 Enabling Netbiter Argos Communication

1. Log on to the internal web pages of the Netbiter WS gateway. See the user documentation for the gateway for instructions on how do do this.
2. Go to **Setup – Netbiter Argos** and set **Netbiter Argos service** to Enable.

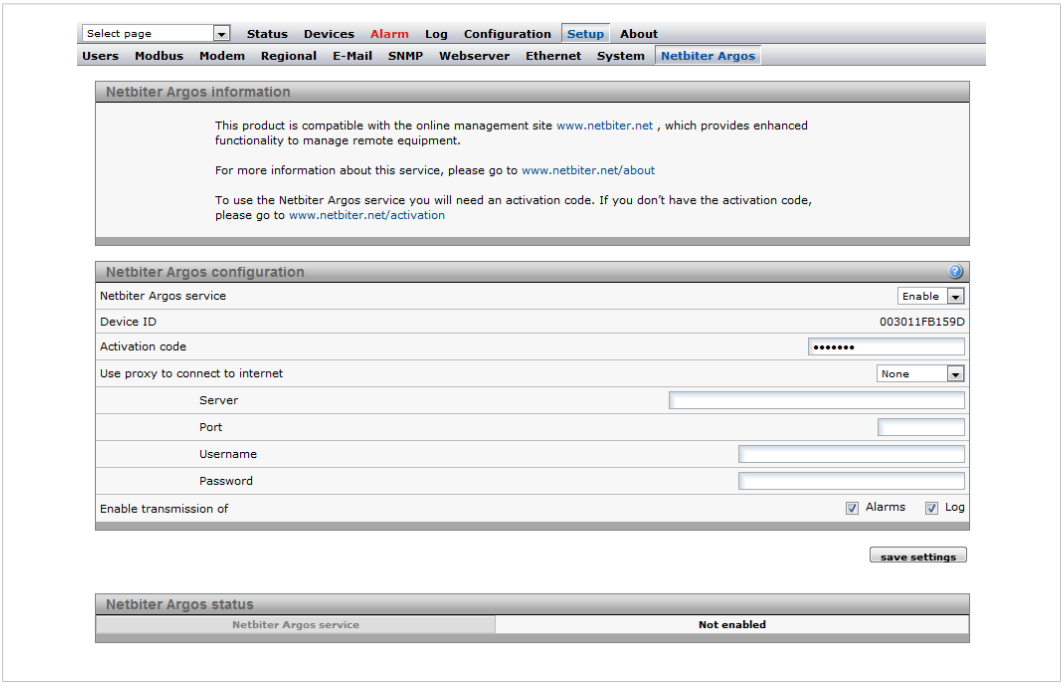

Select page
Status Devices Alarm Log Configuration Setup About
Users Modbus Modem Regional E-Mail SNMP Webserver Ethernet System Netbiter Argos
Netbiter Argos information
This product is compatible with the online management site www.netbiter.net , which provides enhanced functionality to manage remote equipment.
For more information about this service, please go to www.netbiter.net/about
To use the Netbiter Argos service you will need an activation code. If you don't have the activation code, please go to www.netbiter.net/activation
Netbiter Argos configuration
Netbiter Argos service
Enable
Device ID
003011FB159D
Activation code
Use proxy to connect to internet
None
Server
Port
Username
Password
Enable transmission of
Alarms
Log
save settings
Netbiter Argos status
Netbiter Argos service
Not enabled

Fig. 131 Netbiter Argos setup page

3. Enter the **Activation code** for the unit.
4. Enable transmission of Alarms and Log.
5. Click on **Save settings**

The unit will now restart and establish contact with the Netbiter Argos server. If there is a problem, check the DNS server settings.

To set up alarms and logs in the Netbiter WS gateway, please refer to the user documentation for the gateway.

13.2 Adding a Netbiter WS to Netbiter Argos

Netbiter WS gateways are added to Netbiter Argos in the same way as a Netbiter Easy-Connect gateways. See *Getting Started, p. 8*.

When the NetBiter WS is online it will be possible to view data from it.

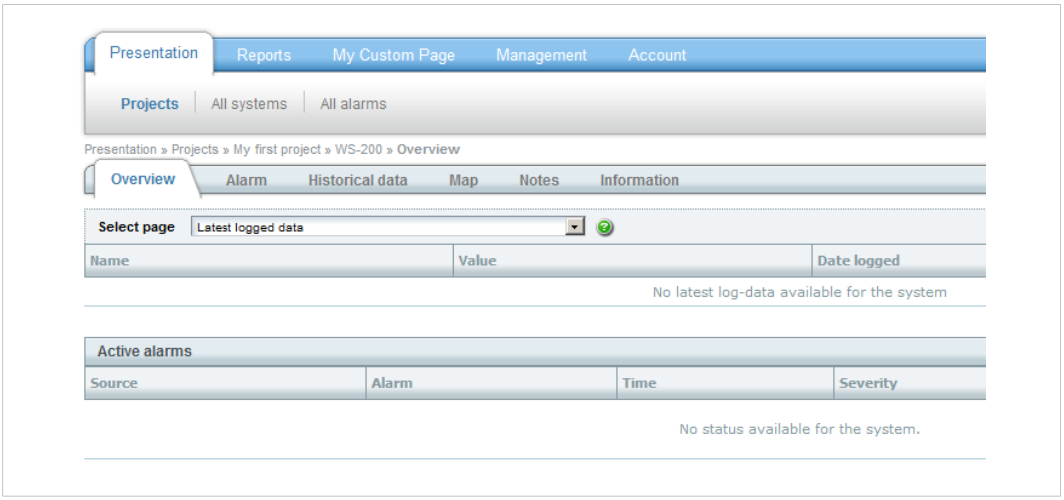


Fig. 132 Netbiter WS system in Argos

Apart from the standard tabs for **Alarms** and **Historical data** it is also possible to create and view custom pages for the Netbiter WS gateway. Custom pages are created and configured in the local web pages of the gateway.

13.3 Updating the Configuration

As configuration changes are made locally in Netbiter WS gateways they need to be transfered to Netbiter Argos using the **Backup** function.

Backing up a Configuration to Netbiter Argos

1. On the **Management** tab, select **Backup/Firmware**.
2. Click on **Backup**. The configuration in the Netbiter WS gateway will now be updated in Netbiter Argos.

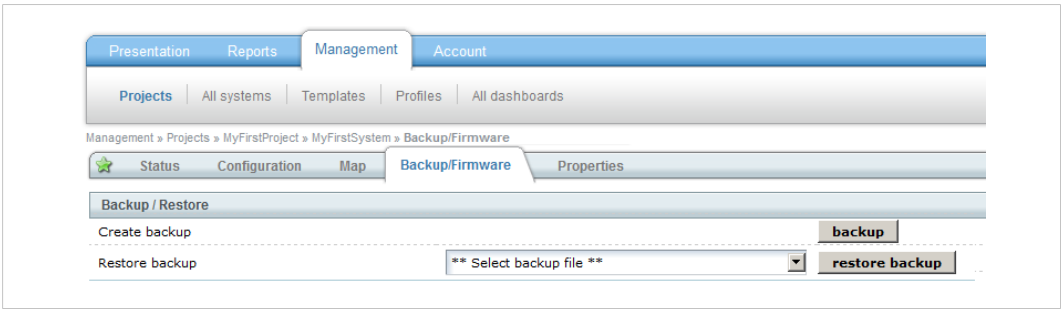


Fig. 133 Backing up a configuration

Restoring a Configuration from Netbiter Argos to the Gateway

1. Select an existing backup file from the drop-down box.
2. Click on **Restore backup** to download the configuration to the gateway.

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